

2. Amendment/Modification No. P00118	3. Effective Date 2004JUN30	4. Requisition/Purchase Req No. SEE SCHEDULE	5. Project No. (If applicable)
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6. Issued By TACOM WARREN AMSTA-AQ-ATBB GREG NORROD (586)574-7379 WARREN, MICHIGAN 48397-5000 HTTP://CONTRACTING.TACOM.ARMY.MIL EMAIL: NORRODG@TACOM.ARMY.MIL	Code	W56HZV	7. Administered By (If other than Item 6) DCMA STEWART & STEVENSON SEALY P.O. BOX 457 SEALY, TX 77474-0457	Code	S4807A
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SCD C PAS NONE ADP PT HQ0339

8. Name And Address Of Contractor (No., Street, City, County, State and Zip Code) STEWART & STEVENSON TACTICAL VEHICLE SYSTEMS, LP 5000 I-10 WEST SEALY, TX. 77474-9506 TYPE BUSINESS: Large Business Performing in U.S.	<input type="checkbox"/>	9A. Amendment Of Solicitation No.
	<input type="checkbox"/>	9B. Dated (See Item 11)
	<input checked="" type="checkbox"/>	10A. Modification Of Contract/Order No. DAAE07-99-C-S030
	<input type="checkbox"/>	10B. Dated (See Item 13) 1999SEP16

Code 0FW39 Facility Code

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:
 (a) By completing items 8 and 15, and returning _____ copies of the amendments; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. **FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER.** If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. Accounting And Appropriation Data (If required)
NO CHANGE TO OBLIGATION DATA

13. THIS ITEM ONLY APPLIES TO MODIFICATIONS OF CONTRACTS/ORDERS

It Modifies The Contract/Order No. As Described In Item 14.

<input type="checkbox"/>	A. This Change Order is Issued Pursuant To: The Contract/Order No. In Item 10A.	The Changes Set Forth In Item 14 Are Made In
<input type="checkbox"/>	B. The Above Numbered Contract/Order Is Modified To Reflect The Administrative Changes (such as changes in paying office, appropriation data, etc.) Set Forth In Item 14, Pursuant To The Authority of FAR 43.103(b).	
<input type="checkbox"/>	C. This Supplemental Agreement Is Entered Into Pursuant To Authority Of:	
<input checked="" type="checkbox"/>	D. Other (Specify type of modification and authority)	

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the Issuing Office.

14. Description Of Amendment/Modification (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE SECOND PAGE FOR DESCRIPTION

Contract Expiration Date: 2004SEP30

Except as provided herein, all terms and conditions of the document referenced in item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. Name And Title Of Signer (Type or print)	16A. Name And Title Of Contracting Officer (Type or print) MICHEAL D. MCHUGH MCHUGHM@TACOM.ARMY.MIL (586)574-6506		
15B. Contractor/Offeror (Signature of person authorized to sign)	15C. Date Signed	16B. United States Of America By _____ /SIGNED/ (Signature of Contracting Officer)	16C. Date Signed 2004JUN30

Name of Offeror or Contractor: STEWART & STEVENSON TACTICAL VEHICLE SYSTEMS, LP

SECTION A - SUPPLEMENTAL INFORMATION

PURPOSE OF MODIFICATION: To issue a No-cost transfer of Mandays and dollars from EWD 1999STS-056, R.4 to 1999STS-066, R.0 and delete restrictive language in Section C.9.12.1

PRIOR CONTRACT AMOUNT: \$49,408,505.28

AMOUNT THIS ACTION: \$0

NEW CONTRACT AMOUNT: \$49,408,505.28

1. The purpose of Modification P00118 is to accomplish a no-cost transfer of mandays and dollars, exercised IAW the rate established by Clause H.11, "Option for 4th Year OCONUS Maintenance Technical Representative Mandays".

2. Mandays and dollars are transferred from/to the following EWDs in the amounts stated. The net effect of the following transactions result in a No-cost change:

EWD ---	MANDAYS -----	ESTIMATED COST -----	SLIN ----
056, R.4	(132)	(\$893,794.86)	4003AB
066, R.0	132	\$893,794.86	4003AB

3. Section C.9.12.1 is revised at the end after OCONUS to remove "spread over 5 years (1999-2003)".

4. Duplicate narrative B002 in SLIN 4003 is deleted.

5. As a result of the transfers identified above, the contract value remains unchanged at \$49,408,505.28.

6. There are no other changes to the terms and conditions.

*** END OF NARRATIVE A 101 ***

CONTINUATION SHEET

Reference No. of Document Being Continued
 PIIN/SIIN DAAE07-99-C-S030 MOD/AMD P00118

Name of Offeror or Contractor: STEWART & STEVENSON TACTICAL VEHICLE SYSTEMS, LP

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
4003	<p>SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS</p> <p><u>DELIVERABLE SERVICE</u></p> <p>SECURITY CLASS: Unclassified</p> <p>OPTION FOR 4TH YEAR OCONUS MANDAYS</p> <p>REFERENCE: H.11</p> <p><u>LEVEL OF EFFORT:</u> 3,617 OCONUS MANDAYS</p> <p>ESTIMATED COST: \$ 3,719,132.49*</p> <p>FIXED FEE: 218,205.38</p> <p>ESTIMATED TOTAL: \$ 3,937,785.93*</p> <p><u>MANDAYS ADDED MOD P00066</u></p> <p>1999STS/MTR-07 R.8 632</p> <p><u>MANDAYS ADDED MOD P00079</u></p> <p>1999STS/MTR-056 720</p> <p><u>MANDAYS ADDED MOD P00082</u></p> <p>1999STS/MTR-056, R.1 -19</p> <p><u>MANDAYS ADDED MOD P00091</u></p> <p>1999STS/MTR-07, R.9 1,445</p> <p><u>MANDAYS ADDED MOD P00099</u></p> <p>1999STS/MTR-056, R.2 230</p> <p><u>MANDAYS ADDED MOD P00104</u></p> <p>1999STS/MTR-056, R.3 609</p> <p><u>MANDAYS TRANSFERRED MOD P00118</u></p> <p>1999STS-056, R.4 (132)</p> <p>1999STS-066, R.0 132</p> <p>SEE CLAUSE F.1 FOR PERIOD OF PERFORMANCE</p> <p>* CORRECTED BY MOD P00107</p>				

CONTINUATION SHEET

Reference No. of Document Being Continued
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Name of Offeror or Contractor: STEWART & STEVENSON TACTICAL VEHICLE SYSTEMS, LP

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT									
4003AB	<p>(End of narrative B001)</p> <p>(Deleted narrative B002)</p> <p><u>SERVICES LINE ITEM</u></p> <p>NOUN: OCONUS MANDAYS - KUWAIT/IRAQ PRON: J035X555J0 PRON AMD: 06 ACRN: DH AMS CD: 51106866007</p> <p><u>Inspection and Acceptance</u> INSPECTION: Destination ACCEPTANCE: Destination</p> <p><u>Deliveries or Performance</u></p> <table border="0"> <tr> <td>DLVR SCH</td> <td></td> <td>PERF COMPL</td> </tr> <tr> <td><u>REL CD</u></td> <td><u>QUANTITY</u></td> <td><u>DATE</u></td> </tr> <tr> <td>001</td> <td>0</td> <td>31-DEC-2004</td> </tr> </table> <p>\$ 2,428,051.73</p>	DLVR SCH		PERF COMPL	<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>	001	0	31-DEC-2004				<p>\$ 2,428,051.73</p>
DLVR SCH		PERF COMPL												
<u>REL CD</u>	<u>QUANTITY</u>	<u>DATE</u>												
001	0	31-DEC-2004												

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 System Technical Support (STS)

The Contractor, for the period set forth in Section F of this contract, shall furnish the supplies and services necessary to accomplish the Engineering, Quality Assurance, Maintenance and related support effort associated with Government initiated changes and improvements to all the variants of the Family of Medium Tactical Vehicles (FMTV) and other efforts associated with production and fielding of the FMTV. The Contractor shall serve as Custodian of the FMTV TDP for the duration of the contract. The contractor shall use the original FMTV TDP as developed and turned over to the Government at the end of contract DAAE07-92-C-R001 as the baseline TDP for this contract, except as amended by government approved ECPs. These efforts will supplement and not duplicate the requirements contained in Sections C.2 and E of this contract. The engineering and related technical support functions shall also apply to all other new model vehicles, and to their components. The Contractor is to perform no effort unless authorized by a Work Directive. These efforts shall be performed in accordance with all specifications, standards, regulations, drawings, guidance and data item descriptions as specified in or developed under this contract, unless otherwise stated herein or in a work directive.

Program Year One 50,000 Man-hours

To avoid conflict of interest, you shall have a dedicated engineering, CM and logistic staff at time of award of this contract, whose sole function is to support STS.

C.1.2 The following are examples of but not necessarily all the tasks that may be required by work directive:

- General Engineering
- Ballistic Systems Protection
- Testing and Test Support
- Field Service Support
- Design and Engineering Analysis
- Configuration Management
- Engineering Change Proposals
- Engineering Release Records
- Configuration Status Accounting & Engineering Records
- Engineering Drawings
- PRO/Engineer Modeling
- Intralink Use
- Failure Analysis & Corrective Action
- Fabrication of Hardware
- Computer Aided Design
- Standardization
- Parts Control
- Specifications
- Packaging Engineering
- Quality Assurance
- Manpower, Personnel & Training Integration (MANPRINT)
- Safety
- Training Support
- Maintenance Engineering
- Provisioning Support
- Logistic Support
- Publications
- Support to demonstrations
- Write Work Directives

C.1.3 Work Directives.

C.1.3.1 All work under this contract shall be performed in accordance with work directives issued by the Contracting Officer's Representative (COR) and approved by the PCO. Each work directive shall include the following information:

- (1) Work Directive number and Title
- (2) Reference to applicable paragraph # in Section C
- (3) Objective of the work to be performed
- (4) Maximum number of hours authorized and detailed estimate of hour breakout versus subtasks
- (5) Detail description of work to be performed
- (6) Detail estimate of COST dollars of labor, materials, travel, freight, purchased services, Other Direct Costs (ODCs), and other pertinent costs

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- (7) Required completion date(s)
- (8) Relative priority of the work to be performed
- (9) Identification of applicable contract number, contractor's name and address.
- (10) Identification of software/prototype hardware to be delivered to the Government.

C.1.3.2 The Contractor shall notify the COR immediately by telephone and E-mail if the dates that work must be performed or data to be delivered will not be met. The Contractor shall follow-up with a letter to the PCO and COR.

C.1.3.3 The Government has the unilateral right to increase, decrease or prioritize the work to be performed hereunder by the issuance of Work Directives signed by the COR. It is understood and agreed that such adjustments shall be made within the general scope of work and level of effort of the contract and without equitable adjustment. The COR has the right to prioritize the work being performed under the contract.

C.1.3.4 If, at any time, the Contractor has reason to believe that the amount (hours, material, and travel) which it expects to incur in the performance of a Work Directive are insufficient, the Contractor shall provide written notification to the COR for appropriate action. The Contractor shall furnish a revised statement of total hours and dollars to complete such work together with said notice. The Contractor shall not exceed any amount authorized for each individual work directive without the express written permission of the COR. Accordingly, the contractor shall notify the PCO and COR when 70 percent of the allocated funds for that particular Work Directive have been expended or obligated.

C.1.3.5 **Electronic Work Directives:** Work directives shall be generated in an electronic format and transmitted via electronic media that are mutually acceptable to the Government and contractor.

C.1.4 **Technical Documentation.** The Contractor shall establish an electronic interface for data exchange between the Government and the Contractor's facility. The Contractor shall electronically submit all documentation required under this contract unless otherwise directed in the work directive. Unless otherwise stated, all technical data and reports shall be submitted by E-mail or by other electronic means mutually agreed to by both parties. Data/Reports submitted by E-mail shall not exceed two mega bytes (Mb) in file size. The File Transfer Protocol (FTP) shall not exceed 6 Mb. Data/reports over 6 Mb shall be transmitted on a CD-ROM via regular mail. All proprietary data/export control data submitted by the Contractor shall be submitted in electronic format. The contractor shall attempt a test transmission to the Government of each type of file and/or electronic method and the Government shall verify receipt and successful transmission before achieving mutual agreement.

C.1.5 **Meetings.**

C.1.5.1 The Contractor shall convene a post-award meeting within forty-five (45) days after contract award to establish working relationships, responsibilities and review preliminary work directives. The contractor shall ensure that all impacted subcontractors are represented at this meeting.

C.1.5.2 The Contractor shall plan, support and conduct reviews, audits and meetings. The Contractor shall provide administrative support for meetings and Government-scheduled reviews. Monthly STS management reviews shall be conducted just prior to Engineering Monthly Review / Program Management Review meetings. As a minimum, an agenda shall be coordinated between Government personnel and the contractor prior to contractor-hosted reviews. The contractor shall prepare an agenda in accordance with CDRL A001.

C.1.5.3 The Contractor shall be required to conduct reviews at the Contractor's facility, subcontractor/vendor facility or any Government facility when requested by the PCO through a work directive regarding a particular project. The contractor shall attend, take part in and prepare minutes in accordance with CDRL A002, if requested. An agenda shall be prepared by the contractor in accordance with CDRL A001 and coordinated between Government personnel and the contractor prior to contractor-hosted reviews.

C.1.5.4 **Weekly Significant Accomplishment Reports (SARs) -** The contractor shall submit a weekly SAR including a 'significant action' status for each open STS task IAW CDRL A003. For each task, there shall be a title, work directive and task no., vendor and Government COTR, description of action completed in the last week, action expected for the next month, and completion progress vs. schedule.

C.1.5.5 **Monthly Cost and Performance Reports (CDRL A004) -** The contractor shall submit monthly Cost and Performance reports in accordance with CDRL A004 (DID-DI-FNCL-80912) providing the status of hours and funds allocated and expended for each Work Directive, including all information required in the SAR from C.1.5.4. A weekly SAR is not required the week that the monthly report is submitted.

C.1.6 **Personnel Experience:**

STS engineering managers: are required to have a minimum of 5 years experience in wheeled vehicle engineering or military vehicle engineering.

STS engineering staff: are required to have a minimum of 3 years Experience in wheeled vehicle engineering or military vehicle

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engineering.

STS non-engineering managers: are required to have a minimum of 3 Years experience in their assigned area of expertise.

STS non-engineering staff are required to have a minimum of 1 year experience in their assigned area of expertise.

The above is to be certified to the COR in writing within 30 days of contract award, and changes are to be certified to the COR in writing within 15 days of a change in personnel being made.

C.2 General Engineering Support

The Contractor shall provide the necessary engineering analysis and design capabilities to correct existing or potential design deficiencies, improve vehicle performance and manufacturing cost effectiveness, and to reduce system cost. The Contractor shall be required to investigate technical areas related to engineering analysis with respect to proposals for engineering changes (including waivers and deviations) and attendant processes and methods. The Contractor shall perform these engineering functions in the areas specified as defined as follows:

(a) Prepare and modify calculations, layouts, drawings, sketches, schematics, charts, PRO/E models and other visual depictions, prepare engineering change proposals and engineering release records, and recommend engineering change proposals for the FMTV and modifications thereto. Contractor shall first screen the pre-existing FMTV model database before generating a new model of any part of the FMTV Family of Vehicles.

(b) Prepare engineering cost estimates for recommended design changes, prototype testing and verification work, and preparation of technical data packages for use in competitive procurements.

(c) Prepare engineering cost estimates for recommended design changes based upon procurement quantities along with an estimated time for manufacture and installation.

(d) Conduct structural analysis (stress analysis, finite element analysis, dynamic modeling, etc.) or failure analysis on parts, components and assemblages.

(e) Modify and fabricate parts, components, and assemblages including mockups and prototype versions of future production related items.

(f) Conduct trial installations and tests of contract items (total vehicles or components thereof), modification thereof and testing related to processes and methods required to evaluate the form, fit and function of the item. Replacement parts shall be provided as necessary for engineering evaluation, for required maintenance, for refurbishment and restoration of the contract item or modifications thereof during required testing. The Contractor shall ship contract items by the most expeditious means as directed by the Contracting Officer's Representative.

(g) Conduct system/design trade-off studies in accordance with Data Item Description DI-S-3606/S-128-1, CDRL A005.

(h) Provide engineering observer services relating to the contract item and data at Government specified locations. Such services shall consist of observations of Government tests, attendance at technical meetings, field review of modified and/or failed contract items, and technical assistance during vehicle fielding. The Contractor shall furnish a copy of all observations and engineering accomplishments.

(i) MANPRINT considerations shall be incorporated into all work performed as part of the Engineering Support in Production effort.

(1) All design changes/modifications, which affect the soldier-machine interface, shall be subjected to Human Factors Engineering analysis, simulation, or testing. If degradation occurs, appropriate actions shall be taken to return the changed area to previous levels, as a minimum. Major modifications, which affect the soldier/machine interface (both operator and maintainer), shall include qualified Human Factors Engineering input to insure that the requirements of MIL-STD-1472 are met. Human Factors Engineering activities performed during this contract shall be reported under Data Item Description DI-HFAC-80741 (Contract Data Requirements List A00S), entitled "Human Engineering Progress Report". This report is required for any month where Human Factors Engineering problems are encountered or Human Factors Engineering effort is expended.

(2) Safety Engineering and Health Hazards considerations shall be integrated into all system design effort per paragraph C.8.

(j) In order to facilitate quick turn-around of engineering task(s) into completed product, the contractor shall either (a) have all the above capabilities in-house, or (b) have standing contractual agreements with subcontractors in order to be able to fulfill the above requirements on an as-needed basis for individual task(s).

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(k) The Contractor shall develop new and revised designs in PRO/Engineer. The PRO/Engineer Models and 2D line drawings shall meet the requirements of the "3-Dimensional Technical Data Package Configuration Management & Modeling Interim Operating Procedure for PM-FMTV", FMTV-MODELING-STD-100T Revision C dated 1/30/2003 which is provided as Attachment 3 and CDRL A00B. All PRO/Engineer models shall be submitted and released in the PM, FMTV Intralink System. If at anytime, to meet schedule requirements, it is determined that a specific EWD Task or Project will be accomplished in a CAD software other than PRO/Engineer, the EWD COTR or FTR will notify the Contractor of the change via e-mail notification.

C.3 CONFIGURATION MANAGEMENT(CM)

C.3.1 Configuration Management: The Contractor shall plan, develop, and maintain a complete Configuration Management Program that contains plans and procedures for its implementation. The program shall describe and define your procedures for controlling changes to the configured item, its 2D line drawings and the PRO/Engineer model. The Contractor shall develop a system for the purpose of tracking engineering changes from conception through incorporation to the hardware, the drawings and the PRO/Engineer model. The Contractor shall maintain and update all configuration management change development, tracking, and implementation data in a database. Data files, proposed model revisions, and proposed drawing revision levels will be temporarily locked upon the Contractors CCB approval prior to being submitted to the Government for final approval. Only those changes directed by the TACOM FMTV CCB will be incorporated to the change documentation. Upon notification of the TACOM FMTV CCB approval, the data files, model revisions, and drawing revision levels will be permanently locked. The contractors configuration system shall be able to track by drawing/part/model revision level and identify the configuration differences between production TDP(s) and the STS TDP. Upon our request, the Contractor shall make available to us any and all of the Configuration Management Program documentation, such as; plans and procedures. Detailed description of your Configuration Management Program in the form of a Configuration Management Plan shall be prepared and submitted with your proposal. All configuration management tasks are to be done only when authorized by Work Directive.

C.3.2.1 Configuration Control:

C.3.2.1.1 The Contractor shall prepare Engineering Change Proposals (ECPs) and their associated Notice of Revisions (NORs) in an electronic format to be agreed upon by the Government and the Contractor which meets the requirements of C.3.2.3. These ECPs and NORs will be in accordance with CDRL A006 and the instructions provided in this clause and Appendix D and E respectively.

C.3.2.1.2 The contract shall not incorporate any changes to the FMTV technical documentation within their control without receiving an approved ECP from the Government.

C.3.2.2 Submittal of Configuration Change Documents - The Contractor shall until end of contract submit complete change document packages (ECPS/VECPs/ERRs etc.) including all attachments, supplemental data, and new/revised PRO/Engineer models with associated 2D line drawings, electronically. When a package contains multiple program files these files will be an attachment to the main transmittal file. Each ECP/VECP shall be submitted as a complete change package consisting of basic change documents, marked prints, to condition prints and any other data files required by this contract.

- a. The basic change document forms and any applicable text documents shall be developed in Microsoft Office format.
- b. To condition drawings shall be submitted in government preferred.PDF format. If .PDF format is unavailable, submission in CALS type 1 (CCITT group 4 raster images) or in JEDMICS C4 ("C4" file extension).
- c. Marked copies of the drawings, also known as redline drawings may be submitted in CALs or Microsoft Office.
- d. If the change document contains other data such as packaging data, RPSTL/TM data, or model, the change document package shall contain attached data files in the format agreed upon.
- e. When multiple document models are supplied in a batch, the overall header file shall have a "dlf" file extension. See attachment 4 (dlf2.xls).
- f. Each change package shall contain a text page to serve as a table of contents for the entire change package. The change content page may be in contractor format.
- g. Each change package shall be organized as follows: 1. Change Content Page. 2. Basic change document forms. 3. Marked Prints. 4. Any other text files providing additional supporting documentation. 5. New/revised 2D line drawings. 6. New/revised PRO/Engineer model. 7. Other data files such as packaging data files or RPSTL/TM files.

C.3.2.3 ECP/VECP Number Assignment - The Contractor shall request a block of ECP/VECP numbers from the Configuration Management (CM) Contracting Officers Representative (COR). These numbers shall be used on individual bases as a control identifier for the ECPs and their related Engineering Release Records (ERRs). Once an ECP number is assigned to the first submission of a change proposal, that number shall be retained for all subsequent submissions of that change proposal. Once an ECP is approved it cannot be changed, supplemented, or revised. A new ECP will be developed and submitted to correct, change, or amend an existing approved ECP/VECP. The Contractor shall maintain records of where and when each ECP number was used. Contractor's records shall track each ECP number from point of assignment through ERR release and ultimate incorporation to the production line. These records shall be

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provided to the Government upon request. When an ECP/VECP requires change or revision prior to approval, the changed and/or revised proposal shall be identified by adding the identifier C1 or R1. These identifiers will become a permanent part of the ECP number. These identifiers will not be transferred to the appropriate ERR number. The complete ECP number including change/revisions identifiers shall not exceed 15 characters.

C.3.2.4 Value Engineering Change Proposals (VECPs) - VECPs shall be prepared in accordance with CDRL A007 and in the same manner as Class I ECPs. (see para C.3.2.5)

C.3.2.5 Engineering Change Proposals (ECPs) Under the terms of this clause the Contractor shall prepare complete ECPs in accordance with the instructions at Appendix A. The Contractor shall use the following standard ECP forms as identified in MIL-STD-973. (DD 1692, DD 1692/2, DD1692/3, DD1692/4 and DD1692/5.) Each ECP shall contain a ECP Enclosure List and ECP Spare/Repair Parts Form (C.3.2.5.2 and C.3.2.5.3) Each ECP shall contain applicable Specification Change Notices and Notices of Revisions.

C.3.2.5.1 With each ECP submitted, the Contractor shall provide justification on the need for changing the TDP. This justification shall address what effect the proposed change will have on the Performance, Manufacturing, Quality, Maintenance, Packaging, MANPRINT, Logistics, Safety, Transportability, Cost, Electromagnetic Environmental Effects and Nuclear Survivability (if applicable). It must also address what effect the ECP will have on the current production, Fielding, Retrofit, and spares. For Interface Control ECPs, the Contractor shall attempt to obtain concurrence from all interface parties and include their (non) concurrences as part of the ECP package. Each new drawing will be approved for design, drawing format, and quality requirements by the Government before approval of the ERR or ECP that includes the new drawings by the TACOM FMTV CCB. Any ECPs that the contractor initiates shall be prepared and submitted IAW CDRL A006 to the procuring agency for evaluation and approval.

C.3.2.5.2 ECP Enclosure List - For each ECP/VECP, the Contractor shall prepare an ECP Enclosure List IAW Attachment 1 and incorporate it as page 2 of the ECP package. The list shall identify all documents (i.e. changed drawings, new drawings, packaging sheets etc.) contained in the ECP package. In addition, the list shall identify all end items affected, what specific elements will be affected, what other ECPs are pending against the documents listed, and what NSNs, if any, will be impacted by any part number change referenced in the ECP.

C.3.2.5.3 ECP Spare and Repair Parts Data - The Contractor shall provide an ECP Spare and Repair Parts Data form when interchangeability is affected or when there is a put and take of parts. The ECP Spare and Repair Parts Data form is to be prepared IAW Appendix B.

C.3.2.6 Notice of Revision (NOR). The contractor shall prepare a NOR for each drawing affected by a ECP. The contractor shall utilize the DD Form 1695 as exemplified in MIL-STD-973 and the instructions provided in DID DI-CMAN-80642B (CDRL A008) and Appendix A of this contract. The changes shall be described in the body of the form in a "from?to" format.

C.3.2.7 Specification Change Notice (SCN). The contractor shall prepare and process SCNs when a permanent change to the system specification is warranted. The SCN shall be submitted in lieu of a Notice of revision as part of a Class I ECP. (DI CMAN 80643B (CDRL A009), Specification Change Notice). The contractor shall use the SCN form DD1696 and instructions at Appendix A when preparing a SCN.

C.3.2.8 ECP Co-User Requirements - If and/or when the contractor prepares an ECP against documents impacting two or more configuration items, regardless of whether the contractor is the drawing custodian or not, the contractor shall electronically provide a complete ECP package in accordance with C.3.2.1 to the co-user(s), requesting comments on the change. When the contractor is not the custodian of the affected document, the contractor shall prepare and provide a complete ECP package to the custodian and all known co-users, requesting concurrences / nonconcurrences / comments. <NOTE: The Government shall provide the contractor access to TACOM TD/CMS in order for the contractor to be able to verify custodian and co-users.> If the contractor still cannot identify the co-user(s)/custodian, contractor shall notify our Configuration Management (CM) FTR (Functional Technical Representative) and request assistance. If the contractor does not receive a response from a co-user/custodian, the contractor shall notify the Government CM FTR and COR of the nonresponse. When all comments have been received, or upon direction from the COR, the contractor shall submit the ECP, including all comments received, to the Government for processing. Unless otherwise directed, coordination with the custodian/co-user(s) must be completed before submitting the ECP to the Government for formal CCB review and disposition.

C.3.2.9 Change documents from other sources. As STS Contractor, the Contractor, shall receive from the Government, ECPs/VECPs/RFDs/RFWs prepared by other sources. The Contractor shall review these proposed change documents for overall adverse system impact. The Contractor shall, in an appropriate text format provide concurrence/non-concurrence (with justification for any non-concurrence) and applicable comments/recommended changes to the Government Configuration Management Office electronically within Ten calendar days of receipt, unless otherwise agreed to by the Government on a case-by-case basis.

C.3.2.10 The Government will forward approved ECPs / VECPs to the applicable drawing custodian for incorporation of the approved change and preparation of the ERR package. As drawing custodian of the FMTV technical data package you shall receive approved ECPs/VECPs from the Government. The Contractor shall prepare and submit an ERR package within sixty (60) days of receipt. An ERR package shall consist of the revised drawings, the ERR, applicable TD/CMS input data and models upon request. Following the

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preparation, submittal, and approval of the ERR package, an electronic copy of both the approved ERR and the changed document(s) shall be provided to all known co-users and applicable DLA agencies in electronic format in accordance with C.4.13.b within ten (10) days of receiving notification of the approved ERR package.

C.3.2.11 The Government will forward vendor PRO/Engineer models/spares RFDs to the contractor for development of an ECP to incorporate the model/change to the FMTV technical data package. These ECPs shall be prepared in accordance with the requirements for ECPs in C.3.2.1.1

C.3.3 Engineering Release Record Preparation - The Contractor shall prepare one ERR for each approved ECP, initial release of an assembly or TDP in accordance with CDRL A010. Multiple ECP releases under one ERR will not be accepted. The ERR number shall be the same as the ECP number. If the ERR preparer is different than the ECP preparer, the ERR preparer will use their 'prefix' in front of the ERR number.

C.3.3.1 Form Preparation - When there are multiple vehicle or end item applications, separate sheets will be used for clarification of Configuration Status Accounting & Engineering Records input data.

C.3.3.2 Supplemental ERRs - Incremental ERRs for assemblies or subassemblies may only be used for the initial release of a major vehicle or system, unless Government Configuration Management approval is granted.

C.3.3.3 Submittal of ERRS - The Contractor shall submit the ERR package consisting of ERR, revised/changed/new drawings to the procuring activity electronically per C.4.13. The Contractor's ERR package submittal shall also include as an attached file the applicable TD/CMS input data. When the ECP originator and drawing custodian are the same contractor, it will be required for the ERR package to be submitted at the same time the ECP package is submitted for Government approval.

C.3.4 Configuration Status Accounting & Engineering Records(CSAER)

C.3.4 Configuration Status Accounting & Engineering Records (CSAER)

C.3.4.1 CSAER Submittal and Validation - The Contractor CSAER system shall be compatible with the Government Technical Data Configuration Management System Enhanced (TDCMS-E). The Contractor quality provisions shall ensure that accurate and complete CSAER computer input data is provided. This CSAER data, also referred to as "TDCMS ENCODING", will be generated as a result of instructions for CSAER computer input preparation as described in OT-89-12345C(T) and CDRL A00A. "Complete CSAER computer input data" means complete TDCMS encoding of the Change/Release File, Detail File, and Configuration File for all ECPs, VECs, PPEs, Initial Release and Direct Release ERRs as well as Change/Release ERRs. Submittal of CSAER data to institute and maintain a complete and permanent audit trail/history of Product Baseline drawings/documents including subsequent changes to that baseline shall be the responsibility of the Contractor. The media used to input CSAER data shall be either:

a. On-line Batch Data Entry via interactive access to our TDCMS Enhanced (TDCMS(E)) database. This method requires the Contractor to use a Personal Computer (PC) with a modem or Internet access to dial in or TELNET to our database server. If the Contractor does not already have on-line access to TDCMS(E), a request for access and login ID must be submitted through AMSTA-TR-E/FMTV. This request shall include supporting documentation that personnel have been investigated and granted authorization

b. Transfer a file electronically using FTP (File Transfer Protocol). Contractor will need to obtain access to the TDCMS(E) server.

C.3.4.1.1 CSAER Data Correction - When the CSAER data input, provided to the Government, is found to have error rates exceeding one percent in control data elements and two percent in non-control data elements, the Government may return the total CSAER package containing the non-conforming data to the Contractor for correction. The contractor will correct errors on submissions in excess of those thresholds, at no cost to the Government. Upon Government direction, the Contractor shall prepare and submit a status report, identifying problems in Contractor's CSAER process or Contractor's database and the plan for corrective action. This report shall be in contractor format.

C.3.4.1.2 TD/CMS Validation - The Contractor shall be responsible for review, edit, and correction if CSAER/TDCMS errors resulting from our audit of your generated input. The Government will provide you with Edit and Update Reports generated by the Edit and Update cycles in TDCMS (Enhanced) TDCMS-E computer database. These reports will identify both accepted and rejected records. Error rate thresholds of 1% for control data elements and 2% for non-control data elements are established. The contractor will correct errors on submissions in excess of those thresholds at no cost to the Government. The Contractor shall electronically resubmit a corrected package within 15 working days and at no cost to the Government. Periodically the Government will provide you with Technical Data Package List (TDPL) reports, (at assembly level or vehicle level) generated by TDCMS. The contractor will correct all deficiencies noted in these TDPLs and submit corrective data within 15 working days.

C.3.4.1.3 Configuration Status Accounting Report - The Contractor shall submit a monthly Configuration

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Status Accounting Report for all changes (regardless of origin) affecting the FMTV. The report will be in ECP number order and shall at a minimum provide the following data:

a. Detailed description of the ECPS/VECPs in process / completed / cancelled; ERRs in process / completed / cancelled; and DWOs in process / completed / cancelled. The report shall identify when the document arrived at each pertinent stage of processing, such as contractor CCB, submittal to Government, Government CCB Date and decision type, ERR development and submittal.

b. The report shall be in Microsoft Office format or equivalent mutually acceptable program and transmitted to the Government electronically.

C.4 Engineering drawings

C.4.1 Engineering Drawings, Product Drawings and Records - The Contractor shall provide Product Design Drawings and PRO/Engineer models in accordance with CDRL A00B, ASME Y14.5M, ASME Y.14.5.1M, ASME Y14.100-2000, ASME Y14.24, ASME Y14.34M, ASME Y14.35M, ASME Y14.1 and the PM, FMTV Modeling Standard(attachment X). It is essential that the drawings be in compliance with the ordering data as defined in Para C.4.14 of this SOW. Detail, subassembly and assembly drawings shall be completely delineated, directly or by reference to other documents, engineering requirements and characteristics such as materials, tolerance methods shall be utilized where applicable per ASME Y14.5M. Engineering drawings and associated lists prepared, shall as a minimum, provide the necessary design, engineering, manufacturing, and quality assurance information sufficient to procure or manufacture an item that duplicates the physical and performance characteristics of the original prototype, without additional design engineering effort or recourse to the original design activity. The Contractor shall deliver all new drawings and redraws (of old drawings) in accordance with paragraph C.4.13. Quality Assurance Provisions shall be included on the drawings and not be separate from the drawings. The QAPs shall be in accordance with the contractor's work instructions. Container drawings for the engine and transmission shall also be provided as product drawings defined herein. Vehicle top assembly drawings, camouflage drawings, kit drawings, and TACOM peculiar drawings shall also be provided.

C.4.2 Engineering drawings and associated lists prepared shall be legible and include those types of drawings most amenable to the mode of presentation. Layout drawings and combinations of types of engineering drawings may be used to convey the engineering end item to cognizant Government engineers and scientists and enable competitive procurement or fabrication of the end item. Detail assembly drawings for welded components and other inseparable assemblies are acceptable where each piece is detailed thereon and none of the individual pieces are provisioned as spare or repair parts.

C.4.3 Source Control Drawings (SOCD) shall be prepared only upon authorization from the Government. All SOCDs shall have a minimum of 2 sources as well as meet the requirements defined by MIL-STD-100G, unless otherwise directed by the COR or FTR. Requests for authorization to use SOCDs shall be accompanied by a copy of the Non-Standard Parts approval request (DD Form 2052) and written justification set forth in DID DI-DRPR-81010 (CDRL A00C), unless otherwise agreed to by the Government on a case-by-case basis.

C.4.4 Dressed Components Contractor shall provide dressed component drawings as directed in EWD if applicable. A dressed component is a properly manufactured, assembled and tested set of parts, subsystems and assemblies that are complete for installation in the vehicle delivered under this contract. Dressed component drawings shall identify all sprockets, pulleys, mounts and other add-ons that adapt the component to the vehicle installation. The dressed component drawings shall be complete in assembly and detail to allow procurement of the dressed component.

C.4.5 Review/Sign Off - Drawings shall be provided to the Government for review by installation at a rate sufficient to allow for the initial review by the Government, coordination of Contractor corrections and Government Final Review and Sign-off. A Generation Breakdown List (GBL) by installation shall be available at the beginning of Government review. After Government sign-off of a drawing the Contractor shall record in the change block of the drawing any subsequent changes made to the drawing. All changed drawings and change notices shall be submitted to the Government for review.

C.4.6 Drawing Approval Drawings shall be approved by PM Engineering or AMSTA-TR-E/MTV personnel. The Government must approve any exception to this requirement in writing. The Government Project Engineer shall provide approval by signing drawings, signing signature cards of those drawings, or by providing electronic or written approval by a means acceptable to the Government and contractor. The Government QA Specialist shall provide approval by signing drawings, signing signature cards of those drawings, or by providing electronic or written approval by a means acceptable to the Government and contractor.

C.4.7 Drawing Number Report - All product drawings including Package Content and Kit drawings produced under this contract shall be assigned Government issued drawing part numbers. These drawing/part numbers can be obtained by submitting a written request to TACOM, ATTN: AMSTA-TR-E/FMTV specifying the type and quantity of drawings being produced, i.e., and kit or product drawings. The allocation of these numbers shall be reported on a frequency specified on the DD Form 1423. This report shall be prepared IAW DI-DRPR-81011 (CDRL A00D) and include the contractor's name, address and contract number and manufacturer part number. A cross-reference list shall be provided showing the Government (TACOM) part number and the corresponding vendor part number.

C.4.8 Drawing Part Numbers for Privately Developed Items - Contractors are prohibited from assigning drawing/part numbers to privately developed items prior to Government approval. If an item is approved for incorporation into the

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design, the contractor shall assign a Government issued drawing number, as referenced in part C.4.7 to the item.

C.4.9 Drawings, CAD PRO/Engineer files prepared for items developed with funds of this Contract or any other Government contract by the Contractor or his subcontractors are property of the Government and shall be provided with unlimited rights. The Contractor shall present the list of exceptions, those existing drawings and CAD files developed at private expense, with his proposal.

C.4.10 Drawing Custodianship - The contractor shall be responsible for all original document files and copies that the Contractor has been designated to maintain as duplicate or superceding originals, in his possession. As drawing custodian, the contractor shall make any changes authorized by TACOM to said original document files, provide copies of the changed document files to co-users and upon request, provide CAD files as defined herein, C4 Raster or .PDF files, and master art work pattern drawings (as defined in ASME Y14.5M, ASME Y14.5.1M, ASME Y14.100-2000, ASME Y14.24, ASME Y14.34M, ASME Y14.35M, ASME Y14.1) to AMSTA-TR-E/FMTV within 10 days of request. The contractor shall not transfer any Government drawing files without written approval from AMSTA-TR-E/FMTV.

C.4.11 Drawing Custodianship List - The contractor shall prepare and submit a drawing custodianship list in accordance with CDRL A00E. The list shall contain all original drawings and associated documents pertaining to this contract. The list shall be an ASCII record, 80 characters in length. Wrapping of records is not allowed. DOS or Unix formatted media is acceptable, 1600 BRI, EBCDEC code format, and standard IBM labels, 80-column format character and 2 ECO (0) blocking factor. Specific media format is to be determined at a start of work meeting.

C.4.12 Procedures for Transferring Original Drawings and CAD PRO/Engineer files - The contractor shall comply with the following sequential procedures at the end of the performance period of this contract.

1. At 60 days before end of contract:

a. Provide a list / printout of drawings, CAD/PRO/Engineer files and packaging documents in your custody to TACOM, AMSTA-TR-E/FMTV for record verification.

b. Identify and provide a list of approved, but open ECPs (i.e., where no ERR/drawing/file updates have occurred) and cross-reference to drawings / files / documents affected by those ECPs. Separate, revise and ship separately. NOTE: If TACOM is to complete the work, drawings/files/documents should be prepared for audit and shipment first.

c. Provide lists of the following information to AMSTA-TR-E/FMTV: (1) Obsolete and superseded drawings and CAD/PRO/Engineer files, and (2) unreleased drawings, CAD files, and packaging documents.

2. At 30 days before end of contract, document the transfer of data by using two letter of transmittal forms, one for obsolete drawings and CAD/PRO-Engineer files, and one for all other drawings, CAD files, and packaging documents. Attach related inventory lists to each letter of transmittal form. Submit to the Government representative for signature and verification of receipt. Data to be transferred shall accompany the transmittal letter. Data transfer is to be electronic IAW C.1.4 or as otherwise specified. The Government reserves the right to be present during the drawing / file inventory process.

C.4.13 Computer Aided Design (CAD) Drawing Requirements - The Contractor shall possess CAD Capabilities to produce drawings under this contract. All new drawings, redrawn and revised drawings shall be prepared with a CAD package. As of January 2003 the Government has determined that all new and revised drawings will be converted to PRO/Engineer Solid Models in accordance with CDRL A00B, ASME Y14.5M, ASME Y14.5.1M, ASME Y14.100-2000, ASME Y14.24, ASME Y14.34M, ASME Y14.35M, ASME Y14.1 and the PM, FMTV Modeling Standard (attachment X). The electronic delivered images shall be in these formats:

a. Native 2-d CAD or 3-d PRO/Engineer solid model. NOTE: Since the entire TDP will not be converted to PRO/Engineer prior to the end of this contract, we will still have active drawings in other CAD formats.

b. A copy of native CAD model per International Graphics Exchange Specification (IGES), revision 5.2 or later, per mutual agreement. The file name shall have an 'igs' extension and the header file shall have a 'dh' file extension.

c. Engineering drawings in government preferred .PDF format or if .PDF format is not available CALS type I (CCITT group 4 raster images) non-wrap format or JEDMICS C4 ('C4' file extension).

d. When multiple documents are supplied in a batch, the overall header file shall have a 'dlf' file extension. See attachment _ (dlf2.xls).

<NOTE 1: The 'dh' header file can be created by using IndexR software that can be downloaded from WEB page: http://www.edms.redstone.army.mil/jmx_htm/jmxftp.html

<NOTE 2: In the 'dh' file, file type for IGES version 5.2 is 50018.

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C.4.14 Engineering Drawing Ordering Data: The Contractor shall prepare Product Design drawings as appropriate IAW the ordering data in this SOW and the tailoring of MIL-STD-100G as follows:

A. Drawing Media: Digital Data as defined herein. Government preferred .PDF format (Paper copies and raster file digital data) are required for government review purposes prior to Government acceptance of drawing files defined under C.4.13.

B. Drawing Format: Government Format, forms supplied by the contractor.

C. Drawing Sheet Size and Format IAW ASME Y14.1.

D. Drawing Reference to ASME Y14.100-2000 and ASME Y14.5M will be made on the drawing including applicable revision levels and notices indicated in note 1.

E. Application Block Data Required on drawing, general use or multi-use notations are allowed, e.g. FMTV/A1, FMTV-A1 where applicable. More specific uses are to be identified by groups or variants, i.e., MTV-A1, LMTV/A1, Tanker, Air- Drops.

F. Drawing Detail, multi-detail is encouraged for inseparable assemblies. Mono-detail and tabulated drawings are allowed.

G. Dimensioning and Tolerancing shall be in accordance with ASME Y14.5M.1994 for new drawings and indicated in note 1. Metric and decimal are allowed. Dual dimensioning requires government approval.

H. Drawing notes shall be on top left corner beginning with note 1 on top.

I. Quality Assurance Provisions shall be integral to the drawing, as specified herein.

J. Types of drawings are approved by the Government.

K. Maintenance of multi-sheet drawings are revised by sheet, with first sheet containing the latest revision level, revised when any sheet is revised.

L. Redrawn drawings require government approval and are advanced one revision level.

M. Maintain revision history in its entirety with brief description of change, document change number and zone cross-references to change area.

N. Adding sheets, renumber sheet using consecutive whole number.

O. Deleting sheets, remaining sheets are renumbered, revision status of sheets block is updated with notations such as cancel or del.

P. Markings on Engineering Drawings, special items and process apply using approved symbols and special notes.

Q. Associated lists are not required.

R. Types of associated lists not required.

S. Angle of projection shall be third angle unless otherwise indicated in title block.

T. Language shall be English.

U. Miscellaneous: Distribution statement required and approved by government; Material shall be defined in note to applicable specifications and standards; Drawing numbers are assigned by TACOM; Revision method requires Government approval; Contractor materials engineer, drafter, checker, and engineer shall all sign drawings.

C.4.15. Drawing Features Summary from the blocks on form DD2554-1 for Product Drawings:

- 1.a. Originals: CAD and PRO/Engineer files in accordance with C.7
- 1.b. INTENTIONALLY NOT USED
- 1.c. Digital Data: Electronic deliveries as specified herein.

2. Cage code and documents numbers:

- 2.a. contractor NA
- 2.b. Government: Use 19207 cage code and TACOM drawing numbers in accordance with the Configuration Management

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section of this contract.

3. Drawing formats, drawing forms and PRO/Engineer Model Start Parts and formats
 - 3.a. Contractor formats NA
 - 3.b. Government formats supplied by contractor

4. Types and quantities of drawings selection
 - 4.a. Contractor selects NA
 - 4.b. Government selects

5. Associated lists: Separate parts list is not allowed; find number parts lists require Government approval.

6. Details

6.a. Multi-detail drawings only permitted for inseparable assemblies.

7. Quality Assurance Provisions required to be integral with the drawings as specified herein.

8. Applicable Vendor Substantiation Data required.

C.4.16 Drawings & TDP Requirements

C.4.16.1 Drawing Tree - The contractor shall establish and maintain a drawing tree reflecting the top/down generation breakdown of the FMTV variants in accordance with DI-DRPR-80558 (CDRL A00F). The drawing tree shall include all separable assemblies, items requiring component specifications, and software. The drawing tree shall serve as a guidance for structuring the TDPL and Logistics Support Analysis Record (LSAR) for FMTV. The drawing tree shall be made available for design and other disciplines' review.

C.4.16.2 Documentation - The contractor shall provide engineering and technical support services and facilities to prepare and maintain drawings, specifications and other technical data comprising the configuration baseline for the FMTV.

C.5 Standardization

C.5.1 Parts control

C.5.1.1 The contractor shall select parts and conduct a parts management program, in accordance with the contractor's standard procedures, which assures the equipment (or system) meets the specification performance requirements with the greatest Improved Operational Effectiveness (described as function of performance, reliability, availability, and life cycle costs).

C.5.1.2 The Acquisition Activity will conduct semiannual reviews of the parts program to assess conformance to internal procedures, application of parts for meeting system Improved Operational Effectiveness, and parts problem areas.

C.5.1.3 Within 90 days after contract award, the contractor shall submit a copy of their Parts Management Plan which may include documented internal procedures as set forth in DI-MISC-80526, which list the minimum coverage for a contractor's Parts Management Program Plan.

C.5.1.4 The contractor may request parts selection and application advise from the Acquisition Activity and/or the Military Parts Control Advisory Group (MPCAG).

C.5.2 Specifications:

C.5.2.1 Specifications and standards shall be considered and selected in the following order of preference:

- (1) Commercial (non-Government) specifications and standards (such as SAE ASTM, ANSI, IEEE, etc.)
- (2) Performance-based specifications. Government specifications shall be in a performance-based format (i.e., form, fit, function, performance, and interfaces), without stating methods for achieving desired results.
- (3) Military-unique or detail specifications and standards, but if selected, full justification must be given as to the reason(s) that a non-Government document or a performance specification cannot be used. In this case, a waiver must be obtained by the Government (TACOM).

NOTE: Use of Non-Government Specifications / Standards and / or commercial components shall not in any way degrade Vehicle System performance.

C.5.2.2 When specifications or standards, other than non-Government documents, are required to be prepared, the

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following formats shall be used: 1) Specifications shall be in book form in accordance with MIL-STD-961, 2) Standards and handbooks shall be in a book form in accordance with MIL-STD-962, 3) Specifications, standards, and handbooks prepared shall assure that they do not restrict or preclude competition.

C.5.2.3 You shall submit a draft of any proposed specification or standard to the Government for review. An annotated copy will be returned to the Government for amendment of the proposed standardization document prior to submission of the final copy.

C.5.2.4 The revised standardization document(s) will be submitted in accordance with CDRL A00G for final review and approval. The document shall incorporate all the changes and corrections generated by the review and evaluation of the previous draft. The final submission shall be provided electronically in PDF format.

C.5.2.5 In all instances, Government (AMSTA-TR-E/FMTV or PM FMTV) personnel shall have final format approval authority, which would include assignment of the document identifier.

C.5.2.6 The application of specifications, standards, and related documents shall be limited to documents specifically cited in the contract as requirements, and to specified portions of documents directly referenced therein (first tier references). All other referenced documents (second tier and below) shall be for guidance only, unless specifically cited in the contract.

C.6.1 Packaging development requirements

C.6.1.1 Packaging development for value engineering change proposals (VECP) and engineering change proposals (ECP) - The Contractor shall develop and provide a packaging impact statement for each VECP/ECP. The packaging impact statement shall include an Item Description Report for each affected item. The impact statement shall also include an alternate schedule for delivery of the packaging data if the data will not be available within ninety (90) days of approval of the VECP/ECP.

C.6.1.2 Packaging development - The Contractor shall develop initial packaging, maintain and update all packaging data for each provisioned item. Initial packaging data shall not be provided if the Contractor's screening of TACOM's Packaging Data Status Report determines that a Level A packaging record is on file. The Government will supply quarterly copies of TACOM's Packaging Data Status Report by e-mail. The contractor shall provide the necessary personnel, facilities, equipment, material, and the electronic data interface. The contractor shall provide facilities, equipment, materials, and access to the provisioned items for packaging development. The Contractor shall include information for each of the items so TACOM can determine the adequacy of the packaging submittal. This includes item drawings and data such as: Source, Maintenance & Reliability codes, Unit of Issue codes, Unit of Measure, Measurement Quantity, and copies of applicable Material Safety Data Sheets. The Contractor shall furnish item drawings and notes sufficient for reviewing the packaging designs in hard copy reproductions or IAW section C.1.4 to AMSTA-TR-E/MTV.

C.6.1.3 Item description - The Contractor shall describe item characteristics and assess packaging requirements. The Contractor shall prepare Search Requests and determine if an existing design is suitable for each repairable item except those items repairable at Organizational Level Maintenance. The Contractor shall submit the Item Description Report in accordance with section C.1.4 to AMSTA-TR-E/MTV.

C.6.1.4 Packaging data entry - The Contractor shall develop, maintain and update packaging data in accordance with DI-PACK-80120B (CDRL A00H), and provide for the entry of information to the computer data base known as the TACOM Packaging Data File. The format and content of Packaging Data Entry shall be as below:

FIELD	POSITION	LENGTH
NATIONAL STOCK NUMBER	1-13	13
PACKAGING INDICATOR CODE	14-16	3
TRANSACTION TYPE	17	1
LOP A TYPE STORAGE CODE	18	1
LOP B TYPE STORAGE CODE	19	1
LOP C TYPE STORAGE CODE	20	1
LOP A PACK LEVEL REFERENCE INDICATOR	21	1
LOP B PACK LEVEL REFERENCE INDICATOR	22	1
LOP C PACK LEVEL REFERENCE INDICATOR	23	1
LOCAL CONTROL	24-26	3
DOCUMENT REVISION	27-28	2
DOCUMENT DATE	29-34	6
NUMBER OF SHEETS	35-37	3
TD/CMS	38	1
SHELF LIFE	9	1
PACKAGING REFERENCE	40-49	10
ITEM NAME	50-58	9
ITEM WEIGHT	59-63	5

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ITEM LENGTH	64-67	4
ITEM WIDTH	68-71	4
ITEM DEPTH	72-75	4
PACKAGING CATEGORY	76-79	4
SPECIAL MARKING	80-81	2
QUANTITY PER UNIT PACK	82-84	3
INTERMEDIATE CONTAINER QUANTITY	85-87	3
CAGE	88-92	5
PART NUMBER	93-113	21
PART INDICATOR	114	1
HAZARDOUS MATERIALS CODE	115	1
PRESERVATION METHOD	116-117	2
CLEANING AND DRYING	118	1
PRESERVATIVE MATERIAL	119-120	2
WRAP MATERIAL	121-122	2
CUSHIONING AND DUNNAGE	123-124	2
CUSHIONING THICKNESS	125	1
UNIT CONTAINER	126-127	2
INTERMEDIATE CONTAINER	128-129	2
UNIT CONTAINER LEVEL	130	1
LEVEL A PACKING CODE	131	1
LEVEL B PACKING CODE	132	1
LEVEL C PACKING CODE	133	1
UNIT PACK WEIGHT	134-138	5
UNIT PACK LENGTH	139-142	4
UNIT PACK WIDTH	143-146	4
UNIT PACK DEPTH	147-150	4
UNIT PACK CUBE	151-157	7
OPTIONAL PROCEDURE INDICATOR	158	1
LEVEL A SUPPLEMENTAL INSTRUCTIONS	159-208	50
SPI REVISION	209	1
SPI DATE	210-214	5
CONTAINER NATIONAL STOCK NUMBER	215-227	13
LEVEL B SUPPLEMENTAL INSTRUCTIONS	228-277	50
LEVEL C SUPPLEMENTAL INSTRUCTIONS	278-327	50
APPROVAL	328-336	9
COMMENTS	337-386	50
STATUS	387-394	8
TRANSACTION DATE	395-400	6

The TACOM approved Packaging Data Entry shall be electronically submitted to AMSTA-TR-E/MTV in an ASCII delimited text format using commas as delimiters. Quotation marks may be used as text qualifiers but are not required.

C.6.1.5 SPECIAL PACKAGING INSTRUCTIONS - The Contractor shall develop, maintain and update the Special Packaging Instruction for each special group item. Packaging processes and materials shall be described for cleaning, drying, preserving, packing, marking, and unitization. Figures and narrative data shall be developed to describe the form, fit and function of packaging in sufficient detail for production. The format and content of Special Packaging Instructions shall be in accordance with Data Item DI-PACK-80121B (CDRL A00J). The Contractor shall submit TACOM approved Special Packaging Instructions data IAW Section C.1.4 to AMSTA-TR-E/MTV.

C.6.1.6 Shipment and storage instructions - The Contractor shall develop only new Equipment Preservation Data Sheets for Shipment and Storage (EPDS) instructions. The Contractor shall maintain and update all the EPDS. The Contractor shall develop packaging for new Basic Issue Items (BII) and Components of the End Item (COEI). Basic Issue Items shall be packaged separate from Components of the End Item. The Contractor shall determine stowage locations and securement provisions. Stowage requirements that deter pilferage and provide for transportation clearances shall be developed. The BII and COEI shall be packed into wood container(s) conforming to PPP-B-601 or PPP-B-621 modified with a plywood top. Stowage provisions shall not interfere with lifting, tie down or other transportation handling. The Contractor will use Purchase Description ATPD 2241 for developing and maintaining EPDS. The format and content of Shipment and Storage Instructions shall be in accordance with ATPD 2241. The Contractor shall submit TACOM approved Equipment Preservation Data Sheets for Shipment and Storage (EPDS) IAW Section C.1.4 to AMSTA-TR-E/MTV.

C.6.1.7 Validation testing of preservation processing and packaging - The Contractor shall validate packaging for Select and Special group items in accordance with Appendix F of Standard Practice for Military Packaging MIL-STD-2073-1C. The Contractor shall submit in contractor's format a report with each packaging data entry.

C.6.1.8 The Contractor shall develop a validation testing proposal for each new and revised Equipment Preservation

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Data Sheet Preparation for Shipment and Storage (EPDS). The Contractor shall schedule and provide AMSTA-TR-E/MTV a 30 day advance notice of validation testing on each EPDS. The Contractor shall validate each new and revised EPDS in accordance with the TACOM approved validation testing proposal. The contractor shall submit, in contractor's format and IAW Section C.1.4, the validation report(s) to AMSTA-TR-E/MTV.

C.6.2 Status reports - The Contractor shall develop and maintain a status report of packaging data. The Contractor shall use TACOM's Packaging Data Status Report and current provisioning records to establish the status of an item's packaging and avoid duplication of effort.

For each drawing part number, the Contractor shall develop the following status listings that shall contain: Commercial and Government Entity (CAGE); Source Maintenance and Recoverability (SMR) code; Item Name (NAME); National Stock Number (NSN); Inventory Control Point (ICP); Packaging Indicator Code (PIC); Local Control (LOC CONT); Date (MMDDYY) of latest packaging document (DATE).

1. An Item Status Listing containing the drawing (part) number (listed in part number sequence) with cross-reference to the primary provisioned part number in the notes.
2. Engineering Change Listing of each VECP/ECP.
3. A Provisioning Change Listing of items affected by a change to the item's SMR code, Unit of Issue (UI), Unit of Measure (UM), or Unit Measure Quantity (UMQ).

The Contractor shall update the listings and develop summary of common group, selective group, special group items, items with current and estimated packaging data, and the total number of provisioned items.

Status reports shall be sent quarterly in Contractors format and IAW CDRL A00K and Section C.1.4 to AMSTA-TR-E/MTV. The first submittal of the report shall be in the fourth month after contract award.

C.6.3 Program schedule - The Contractor shall determine and update program organization. The Contractor shall provide and maintain a list of the Contractor's packaging development personnel including their education and experience in the field of packaging. The Contractor shall provide and maintain program information related to test and development equipment. The Contractor shall develop and maintain a plan for access to the parts needed for packaging development. The Contractor shall develop and maintain a schedule for preservation processing and packaging development to include milestones for developing: Packaging Data Entry, Special Packaging Instructions, Shipment and Storage Instructions, Validation Test Reports, Status Reports, Item Description Reports, and Long Life Returnable Container Development Records. The Program Schedule shall be submitted quarterly in Contractors format and IAW Section C.1.4 to AMSTA-TR-E/MTV. The first submittal of the Program Schedule shall be in the fourth month after contract award.

C.6.4 Long life reusable containers ? The Contractor shall maintain and update the existing technical data package (TDP) for LLR shipping containers for Government directed initiatives. Updates to the TDP shall include validation testing which establishes the capability of the LLR to protect the integrity and serviceability of the item for which the container is designed. The Contractor shall maintain engineering drawings and associated lists to describe the form, fit, and function of each LLR container. Drawings shall be sufficient to permit competitive procurement of the LLR. The format and content of Long Life Reusable Container Development Records shall be in contractor's format (CDRL A00L). The updated drawings shall be submitted IAW Section C.1.4 to AMSTA-TR-E/MTV.

C.6.5 Hazardous material data - A copy of hazardous material data sheet shall be provided for use in packaging development. The format and content of the hazardous material data sheet shall be in accordance with 10.2.5b of Data Item Description DI-SAFT-80102 (CDRL A00M).

C.7 Quality Assurance:

C.7.1 Quality System: The Contractor shall operate under a Quality System Standard for all products and services provided under this Contract. This system shall be based upon one of the following standards: Commercial Quality Standard QS 9000; Military, MIL-Q-9858; International, International Standards Organization (ISO) ISO 9000 series; American Society of Quality Control (ASQC) standards, Q 90 series or other system standards may be acceptable, if approved by the Procuring Contracting Officer (PCO).

C.7.2 Quality Engineering Reviews: The Contractor is responsible for auditing and assessing the quality of the Quality Control System. The Contractor shall perform quality engineering reviews of all TDP documentation affected by a Work Directive. These reviews are to decide the type and amount of process and product controls and tests necessary to achieve a cost-effective, quality product. Perform quality engineering reviews at a point in time, which shall assure that the resulting recommended controls and tests are processed and reflected in the TDP. Define required process and product controls and tests on applicable Quality Assurance Provisions (QAPs) or on specifications referenced by the TDP. The Contractor shall use Appendix H of this Contract, titled "Requirements for Developing and Maintaining Quality Assurance Provisions (QAPs)," and TACOM Pamphlet, DRSTA-P-702-155, titled "Preparation and Maintenance of Quality Assurance Provisions (QAPs)", as a guide when performing Quality Engineering Reviews.

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C.7.3 Quality Assurance Provisions: Quality Assurance Provisions (QAPs) shall be developed or updated as necessary for all applicable items, components or assemblies affected by a Work Directive in accordance with work instruction number QA-34-005.001. Developing and updating of QAPs shall be based on the recommendations of the Quality Engineering review. When developing QAPs, the following considerations shall be made towards achieving a cost-effective, quality product: limit the use of specialized test and inspection equipment to only when necessary.

C.7.4 Critical Safety Items: The Contractor shall identify critical safety items within the TDP for all new designs that are a result of a Work Directive. Critical safety items are items with one or more critical safety characteristics. A critical safety characteristic is a feature that if non-conforming would result in a catastrophic failure of an item or assembly that could result in loss of life or injury to humans. Designs that can not be redesigned from a practical standpoint shall be brought to the attention of the PCO and COTR as soon as possible. At the PCO's or COTR's discretion, the Government may authorize the Contractor to identify the feature or characteristic on the drawing as a critical safety item in accordance with the Contract and the Work Directive.

C.7.5 Quality Documentation: When required by a Work Directive, the Contractor shall develop and maintain one or more of the following as specified in the Work Directive: Final Inspection Record (FIR), use MIL-STD-40001A as a guide; Quality Engineering Planning List (QEPL) or Master List of Quality Assurance Provisions (LQAP), use TACOM Pamphlet DRSTA-P-702-155 as a guide; other documents or drawings as defined by the Work Directive.

C.8 Safety engineering. The Contractor shall integrate system safety engineering into all system design efforts performed under this contract.

C.8.1 System design activities and operational/maintenance procedures developed by the Contractor shall consider but not be limited to the following:

C.8.1.1 Identifying hazards associated with the system by conducting safety analyses and hazard evaluations. Analyses shall include both operational and maintenance aspects of the vehicle along with potential interface problems with planned subsystems.

C.8.1.2 Controlling identified hazards by either eliminating or reducing the residual risk to acceptable levels by appropriate design and material selection.

C.8.1.3 Locating equipment components so that access to them by personnel during operation and maintenance actions does not require exposure to hazards such as high temperature, chemical burns, electrical shock cutting edges, sharp objects or concentrations of toxic fumes above established threshold limit values. All moving parts, mechanical power transmission devices, exhaust system components, pneumatic components and hydraulic components, which are located to be a hazard to operators or maintenance personnel, shall be either enclosed or guarded. Protective devices shall not impair operational effectiveness.

C.8.1.4 Assuring that suitable warning and caution notes are included in instructions addressing operation, maintenance, assembly or repair and that suitable warning labels are placed on hazardous components or equipment.

C.8.1.5 To the extent specified in Work Directives, changes made to the vehicle shall comply with Department of Transportation Federal Motor Vehicle Safety Standards and the Clean Air Act of 1970.

C.8.2 Engineering Change Proposal System Safety Report (ESPSSR). The Contractor shall prepare an ECPSSR for each Class I ECP. The report will be prepared in accordance with the instructions in DI-SAFT-80103A (CDRL A00N) and include reference to the ECP control number. The report will contain the signatures of the project engineer and designated individual for system safety review.

C.8.3 Safety Assessment Report. As a result of safety analyses, hazard evaluation and Contractor testing, the Contractor shall prepare a Safety Assessment Report in accordance with DI-SAFT-80102A (CDRL A00P). The Safety Assessment Report shall be submitted in draft form for Government review 90 days prior to the start of Government test or as otherwise stated in the Work Directive. The final Safety assessment Report shall be submitted within 30 days of Government review.

C.8.4 Radioactive Material. Radioactive Material shall not be used in any items or material provided to the Government as part of this contract.

C.8.5 Health Hazard Assessment (HHA). The contractor shall perform and document a health hazard assessment, in accordance with Task 207 of MIL-STD-882C, to identify health hazards and to recommend engineering controls, equipment, and/or protective procedures, to reduce the associated acceptable risk. Issues to be addressed within the report shall include but not be limited to:

- a. Noise.
- b. Toxic Gases.
 - (1) Carbon Monoxide.
 - (2) Ammonia.
 - (3) Oxides of nitrogen and sulfur.
 - (4) Acrolein.

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- c. Toxic Chemicals.
- d. Ionizing or non-ionizing radiation.
- e. Heat and Cold. (to include heat stress)
- f. Shock and vibration to crewmembers.
- g. Address the chemicals identified in the Materiel Safety Data Sheets to be provided in the SAR (DI-SAFT-

80102A).

C.8.5.1 The data for this report will be, as much as possible, collected from the vehicle(s) the contractor will submit for government testing or contractor demonstration. Data will be identified as to its source. The format of the HHA shall be in accordance with DI-SAFT-80106A (CDRL A00R).

C.9 Integrated Logistic Support

C.9.1 Integrated Logistics Support program requirements

The Contractor shall update, manage, and execute a continuation of the Integrated Logistics Support Program established in contract DAAE07-92-C-R001. The Integrated Logistics Support Program is the means to influence design with respect to logistic support, and to identify, integrate, and acquire the elements of support. These elements of support include maintenance planning, supply support including provisioning, Test, Measurement and Diagnostic Equipment (TMDE), transportation and handling, technical data including technical manuals, facilities, manpower and personnel, training, and computer resources support.

C.9.1.1 Dedicated hardware. The Contractor shall provide for sufficient quantities of dedicated hardware (end items, components, repair parts, consumable supplies, tools, and support equipment) to accomplish all Integrated Logistics Support development, reviews, validations, and verifications.

C.9.1.2 System engineering interface. The Contractor shall identify and perform the actions necessary to ensure that logistics requirements and maintenance planning factors are given an equitable weight in decisions made by other contractually required system engineering specialties. Decisions made by other system engineering specialties, which adversely affect logistics requirements or maintenance planning factors, shall be identified. The Contractor shall establish, maintain, and utilize a procedure to ensure that all data describing the most recent design configuration flows immediately to the Integrated Logistics Support element development activities in an orderly manner. The Integrated Logistics Support element development activities shall be given immediate and sufficient access to the latest configuration hardware. The procedures shall ensure that all engineering configuration changes must have the concurrence of Integrated Logistics Support manager.

C.9.1.3 Subcontractor control

The Contractor shall establish and maintain control of subcontractor Integrated Logistics Support accomplishment. The Contractor has the responsibility of ensuring that subcontractor efforts satisfy Government requirements.

C.9.2 LSA Program Requirements.

C.9.2.1 Logistics Support Analysis (LSA) Program. The contractor shall retain the FMTV LSA program established in contract DAAE07-92-C-R001 and update LSA documentation to reflect changes in support requirements resulting from changes to the system or equipment design or operational requirements, logistic support improvements or the correction of deficiencies discovered through analysis of test results or by the Contractor's verification of LSAR documentation. The contractor shall perform LSA tasks as appropriate to analyze and document engineering and vendor changes, to correct errors and to resolve test and field problems. The contractor shall update the LSAR C, H and H1 records as a result of this analysis. Future FMECA calculations shall be kept as part of the backup data to this file.

C.9.2.2 The tasks the contractor shall be required to perform as part of this work effort include:

- a. Functional Requirements Identification (LSA Task 301) (Including Failure Modes, Effects, Criticality Analysis (FMECA), Reliability Centered Maintenance Analysis (RCM)
- b. Evaluation of Alternatives and Tradeoff Analysis (LSA Task 303) (Including Level of Repair Analysis)
- c. Task Analysis (LSA Task 401).

The contractor shall propose for Government approval the extent of LSA effort to be performed for each engineering change or vendor change. These efforts shall be grouped based on ILS configuration cut-offs as proposed by the contractor.

The contractor shall correct errors and resolve field and test problems within FMTV LSAR and all FMTV Logistic's products required by this scope of work.

C.9.2.3 Documentation within LSAR The contractor shall document the results of all LSA efforts within the existing FMTV Logistics Support Analysis Record (LSAR). The contractor shall use format within MIL STD 1388-2A for the FMTV LSAR. The

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contractor shall make available both the FMTV LCN Master File and specific LSAR output reports as requested by the Government.

C.9.2.4 LSAR delivery. The contractor shall deliver selected LSAR data and reports as requested by the Government, directly to the Government (AMSTA-IM-HMF), via Email in Excel, or LEADS, or Word format. At the conclusion of the FMTV work effort within this contract, the contractor shall deliver the complete FMTV LSAR (CDRL ILS04, DI-ILSS-80114) including any supplemental information and vendor data in hard copy to AMSTA-IM-HMT.

C.9.2.5 FMTV logistics support package update The contractor shall update the existing FMTV Logistics Support Package (Provisioning Data, Technical Manuals, Support Lists) based on the results of LSA and LSAR documentation to include engineering changes, vendor changes, error corrections and test and field problem resolution efforts.

C.9.3 Maintenance Support Development

C.9.3.1 Maintenance planning. The Contractor shall update as needed the planning for maintenance for the vehicle systems/equipment and hardware. Maintenance planning updates shall identify, document, and establish effective and economical methods required to efficiently maintain and operate the FMTV. Determination of the total range and quantity of maintenance tasks required to support this equipment shall be accomplished by the iterative mating of the Government's maintenance concept with the equipment's essential maintenance characteristics. Maintenance Planning updates shall be documented in the Logistics Support Analysis Record and manifested in the LSA 004 (Data Item Description DI-ILSS-80114 Contract Data Requirements List ILS04), output summaries. All maintenance planning updates shall be based on the Army Maintenance Management System described within AMC PAM 750-1.

C.9.3.2 Maintenance Allocation Chart. The Contractor shall update the Maintenance Allocation Charts developed under the contract DAAE07-92-C-R001 in accordance with Data Item Description DI-L-7189 (Contract Data Requirements List ILS05), and MIL-M-63038B, Technical Manual, with Amendment 1. The Maintenance Allocation Chart shall cover all maintenance levels up to and including depot maintenance. The Maintenance Allocation Chart shall be included as an appendix to the Unit Level Maintenance Manuals. As the Maintenance Allocation Chart forms the base line for remaining logistics and maintenance tasks, the contractor shall update a manually generated Maintenance Allocation Chart in accordance with Data Item Description DI-L-7189, as required. The LSA 004 Maintenance Allocation Summary and LSA 020 Tool and Test Equipment Requirements as specified in Data Item Description DI-L-7189 (Contract Data Requirements List ILS05) shall be employed to satisfy automated Maintenance Allocation Chart delivery requirements.

C.9.3.3 Preventive maintenance checks and services. The Contractor shall update Preventive Maintenance Checks and Services for the following:

- a. Operator/crew maintenance (for eventual inclusion in the operators Maintenance Manual).
- b. Unit maintenance (for eventual inclusion in the Unit Maintenance Manual).

The Preventive Maintenance Checks and Services requirements shall be updated in accordance with AMC PAM 750-2. The individual Preventive Maintenance Checks and Services (for the crew/operator and unit maintenance) shall be delivered as specified in the Technical Manual exhibits and is subject to procuring activity approval. Initial submission of Preventive Maintenance Checks and Services may be in the form of validated Logistics Support Analysis Record D data sheet with supporting art work, and shall reflect the results of related Logistics Support Analysis/Logistics Support Analysis Record analysis/documentation efforts. Only approved Preventive Maintenance Checks and Services shall be submitted to support testing.

C.9.4 Provisioning.

C.9.4.1 Repair Parts and Special Tool Lists. The Contractor will prepare and complete all Repair Parts and Special Tool Lists (RPSTL), related portions of the Logistic Support Analysis (LSA) "H" sheets during the provisioning update process to include Technical Manual (TM) Designation, Figure No., Item No. and Functional Group Code. The resultant database will be used by the Contractor to update RPSTLs. Prior to RPSTL change/revision submittal, the Contractor must ensure that the RPSTL and associated TM procedures have been accurately reconciled to each other (i.e. SMR Codes correctly match Maintenance Levels and are accurately broken down, Functional Group Codes combine components accurately). Not accurately reconciling the changes/revisions to TMs and RPSTLs will result in RPSTL rejection.

C.9.4.2 Supplementary provisioning technical documentation. The Contractor shall submit drawings required for provisioning updates in accordance with DI-V-7000A (Contract Data Requirements List ILS06). The Contractor shall maintain a current index and file of Military and Federal Specifications and Standards. Supplementary Provisioning Technical Documentation submitted for such items will be from current drawing files, even though an outdated item may be called out on the engineering design drawing. Supplementary Provisioning Technical Documentation shall be available at each Provisioning conference (See Paragraph) for Government review and approval/disapproval. All drawings shall be in the English language. The Government will not accept provisioning Technical Documentation not translated to English. All approved subcontractors' Federal Supply Code for Manufacturers/Commercial and Government Entity (FSCM/CAGE) Codes and Reference Number(s) are to be cited by the Contractor (typed, stamped, or in legible writing with authorized signature and date) on drawings when furnished concurrently with each submitted increment of Provisioning documentation for each item SMR Coded 'P'. Paragraphs c (commercial catalogs or catalog descriptions) and d (sketches or photographs with dimensional, material, mechanical, electrical, and other descriptive characteristics) of Data Item Description DI-V-7000A (Contract Data Requirements

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List ILS06) do not apply. Waiver(s) of these requirements and/or exemptions will be only authorized by the Government on a case by case basis except for source controlled drawings. If the waiver is approved, the Contractor may furnish the drawings with restrictive markings marked in accordance with general provision 1-8 (Rights in Technical Data and Computer Software) stamped in bold letters or furnished a complete descriptive characteristic of the item. This shall include, as a minimum, the major noun, specific dimensions (width, height, length, thickness), material content, part number, source of supply, type (mechanical or electrical, etc.), and if the item is a kit or assembly, list all down parts to include a brief description of each down part.

C.9.4.3 Provisioning parts list. The Contractor shall prepare and deliver the Provisioning Parts List (LSA-036) for the provisioning updates in accordance with data Item Description DI-V-7002A (Contract Data Requirements List ILS07) . The Provisioning Parts List shall contain the data elements identified on DD Form 1949-1, Logistics Support Analysis Record Data Selection Sheet, Attachment 4 of this contract.

C.9.4.4 Each file shall contain no more than 3,000 line items, (per system) per incremental load. The maximum/minimum shall be dependent upon the complexity of the system(s) and at the discretion of the responsible Government office as identified on Block 6 of Contract Data Requirements List.

C.9.4.5 Initial submissions and changes/deletes shall be physically separated into separate files per PCCN, labeled as to the type of data and accompanied with two-part card image print (80/80) listings.

C.9.4.6 The contractor shall have two (2) copies of the LSA036 report data for each repair part being reviewed. Drawing documentation shall also be presented at Provisioning conferences.

C.9.4.7 The Government shall randomly select a sample of from twenty percent (20%) to one hundred percent (100%) of the Provisioning List Item Sequence Numbers submitted by the Contractor during the Provisioning Conference. If the sample is ten percent (10%) defective or greater, the Government representatives will contact the Contracting Officer's Representative with a recommendation that the conference be terminated. The entire data package will then be returned to the Contractor for corrective action. The Contractor shall review the complete data package to assure the submittal meets the requirements of the contract. The data submitted will be considered defective if it contains two (2) or more of the following types of errors: incomplete, missing, or erroneous technical data/documentation.

C.9.4.8 The Contractor shall maintain and continuously update his Data Base with the Provisioning Technical Documentation Report (X40CXX6034R) provided by the Government, (i.e., part number changes, additions and/or deletions source, maintenance and recoverability codes, and failure factors throughout the contract).

C.9.4.9 Contractor shall correct validation rejects in the format of the LSA-36 Report (Provisioning Parts List). Submission shall be as outlined in C.9.4.3. The Contractor is responsible to ensure that the data submitted is compatible with Commodity Command Standard System ADSM 18-LEA-JBE-ZZZ-UM-06, Provisioning On Line System. Contractor shall submit corrections to the Government within thirty (30) days of receipt.

C.9.4.10 Tools and test equipment list. The Contractor shall update the Tools and Test Equipment List from contract DAAE07-92-C-R001 with any additional tool or test equipment requirements and submit in accordance with CDRL ILS15. The updates will include those peculiar support items which are required to support and maintain the end item throughout its life cycle, and which do not appear in U.S. Army Supply Catalog. A list of Army Supply Catalogs can be found in DA Pamphlet 25-30, Section 6, which will be provided to the Contractor in accordance with Section H.

C.9.4.11 Design change notice. The Contractor shall notify the Government of those design or part changes which modify, add, delete or supersede any of the operating, maintenance or repair parts information that was previously provided under the contract. The Contractor shall prepare and deliver a Design Change Notice in accordance with DI-V-7009A (Contract Data Requirements List ILS08). Design Change Notice documentation shall be processed to TACOM within thirty (30) days after manufacturer production decision. Government approval of design change notices shall not imply approval of design changes. Approval of design changes shall be through the established contractual process.

C.9.4.12 Provisioning and other preprocurement screening data. The Contractor shall conduct pre-procurement screening for standardization of all commercial items selected as repair parts and use comparable military/commercial standards where applicable. CONTRACTOR IDENTIFIED NSNs are to be listed on the 02D CARD OF THE 036 REPORT. THIS REQUIREMENT IS IN LIEU OF HARD COPY SCREENING REPORTS. The Contractor submittal shall be updated to reflect the current prime part numbers as indicated by the results of the screening process. This screening will be used to select valid part numbers for input to the Provisioning Master Record for total support of the end item.

C.9.4.13 Maintenance replacement rate (failure factors) The Contractor shall develop a rationale and methodology for determining Maintenance Replacement Rates in accordance with MIL-STD-1388-2A using the following data (Contractor must consider on or off road application):

a. Engineering Data.

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- b. Warranty Data.
- c. Testing and Developmental Documentation.
- d. Historical Data of a Similar Piece of Equipment.

Maintenance replacement rate two (2) is the wartime failure rate and will be, at a minimum, 2.5 times greater than that of peacetime, based on the following:

- a. For Source Codes:
 - (1) PA - Item procured and stocked for anticipated or known usage.
 - (2) PC - Item stocked, shelf life.
 - (3) PG - Item stocked for sustained support. Uneconomical to reproduce at a later time.

- b. For Essentiality Codes:
 - (1) 1 - Failure of this part will render the end item inoperable.
 - (2) 7 - Item does not qualify for assignment code of 1 but is needed to prevent impairment of, or the temporary reduction of, operational effectiveness of the end item.

C.9.4.14 Provisioning parts list index - The contractor shall prepare and submit a listing by manufacturer's reference numbers of all items listed in the Provisioning Parts List cross-referenced to each PLISN. The Provisioning Parts List Index is to be prepared and submitted by the Contractor, in accordance with Data Item Description DI-V-7193 (CDRL ILS14), concurrently with the Provisioning Parts List. THE CONTRACTOR shall SUBMIT AD-HOC REPORTS ONE EACH FOR THE MTV MASTER, LMTV MASTER, LMTV/MTV TRAILER MASTER AND AN ADDITIONAL REFERENCE NUMBER (ARN) IN Excel format IN LIEU OF HARD COPY REPORTS.

Report data elements include:

Provisioning Contract Control Number (PCCN)
 Provisioning List Item Sequence Number (PLISN)
 Item Name (ITMNM)
 Commercial and Government Entity Code (CAGE)
 Part Number (PN)
 Additional Reference Number (ARN)
 Reference Number Category Code (RNCC)
 Reference Number Variation Code (RNVC)

C.9.4.15 Expendable/consumable items. The Contractor shall ensure that only the items which are repair parts, or part of the end item top-down generation breakdown, will be loaded to the Provisioning Master Record. All others will be rejected. The following items shall not be loaded to the Provisioning Master Record, as well as other consumable or expendable items, which are not installed on the end item as an integral part of its design. However, they must have Army as a user and be procurable by the user.

Fiber rope	Cordage	Twine	Abrasive cloth	Papers	Powders	Polishing compounds
Solvent	Fuels	Corrosion preventive	Cleaning compounds	De-icing	Metal cleaners	Antifogging compounds
Paints	Primers	Polishers	Brooms	Brushes	Towels	Cleaning cloths
Glass cleaners	Soap	Wax	Pigments	Sealers	Shellacs	Thinners
Varnish	Adhesives	Preservatives	Rust inhibitors	Capsules	Cements	Work clothing
Caps	Gloves	Individual equipment	Packs	Bags	Belts	Solid fuels
Coals	Liquid Fuels	Gasoline	Oil and Greases			

C.9.5 System Support Package. The Contractor shall deliver a System Support Package (SSP) to support each test required by this contract. The contractor shall deliver SSPs to each test site 30 days prior to the start of test. Items not

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furnished or not furnished in sufficient quantities to support test shall be delivered to the test site within 24-48 hours of notification. The SSP shall include: Latest configuration spare and repair parts, all special tools and TMDE, and latest version of printed equipment publications. A System Support Package Component List shall be prepared for each site and shall be delivered 60 days prior to delivery of vehicles to the site, in accordance with CDRL ILS18.

C.9.6 Support Equipment and Test Measurement and Diagnostic Equipment.

Test Measurement and Diagnostic Equipment requirements, including Contractor's inspection equipment, shall be satisfied by selecting items from the following sources, listed in order of preference: DA Pamphlet 700-21-1 Test Measurement and Diagnostic Equipment Preferred Items List, SB 700-20 Army adopted/other items selected for authorization/list of reportable items (Chapter 2); DA Pamphlet 700-21, Test Measurement and Diagnostic Equipment Register; commercially available Test Measurement and Diagnostic Equipment; and Test Measurement and Diagnostic Equipment developed to specifically support the equipment being procured. In the last two (2) cases, specifications and justifications shall be provided to the procuring activity as soon as the need for such equipment is recognized. The specifications and justification shall be documented on Logistics Support Analysis Record E data records as specified in paragraph C.9.2.4. Justification for using Automatic Test Equipment other than Integrated Family of Test Equipment shall include comparison of life cycle costs for Integrated Family of Test Equipment and for proposed alternatives. SPORT-ICE will be provided to the Contractor as GFE. Any other TMDE required will be discussed and agreed to on a case-by-case basis.

C.9.7 Common/Special Tools and Test Equipment

C.9.7.1 Requirements for common tool sets and kits, common test measurement and diagnostic equipment and common maintenance (shop) equipment shall only be satisfied by selecting items available at the proper maintenance level, in accordance with the documents cited in paragraphs C, which will support the equipment being procured. Tools, test measurement and diagnostic equipment and maintenance (shop) equipment not available at the proper maintenance level, in accordance with the documents cited in paragraphs C, which will support the equipment being procured shall be considered special. Requirements for recommended special tools, special test measurement and diagnostic equipment and maintenance (shop) equipment shall be satisfied by selecting items in the following order of preference; (1) items already in the Army supply system; (2) items already in the Federal supply system; (3) commercially available items not in the Federal supply system; (4) modification of existing items; (5) design and development of items specifically to support the equipment being procured. The Contractor shall conduct a detailed analysis (Logistics Support Analysis Subtask 401.2.1) of each operation and maintenance task (excluding Depot level maintenance only task) requirement for the equipment being procured in accordance with MIL-STD-1388-2A and determine the following:

- a. Common tool sets and kits, common test measurement and diagnostic equipment and common maintenance (shop) equipment required to perform the task.
- b. Recommended special tools, special test measurement and diagnostic equipment and special maintenance (shop) equipment required to perform the task.
- c. Maintenance level assignment based on the Army Maintenance concept of the equipment being procured.

C.9.7.2 Special Tools and Test Equipment List The Contractor shall update the list of recommended special tools, special test measurement and diagnostic equipment and special maintenance (shop) equipment submitted under contract DAAE07-92-C-R001 with any new requirements. These updates shall include all recommended special tools, special test measurement and diagnostic equipment and special maintenance (shop) equipment that are required to support and maintain the system throughout the life cycle at Unit, Direct Support, and General Support levels of maintenance.

C.9.7.3 Special Tools and Test Equipment Description and Justification The Contractor shall prepare and deliver Logistics Support Analysis Record Data Records E and E1 for recommended special tools special test measurement and diagnostic equipment and special maintenance (shop) equipment in accordance with Data Item Description I-ILSS-80114 (Contract Data Requirements List ILS04).

C.9.7.4 Special Tool and Test Equipment Technical Documentation

The Contractor shall furnish Level 2 or Level 3 drawings for all recommended special tools, special test measurement and diagnostic equipment and special maintenance (shop) equipment in accordance with Data Item Description DI-V-7000A(T) (Contract Data Requirements List ILS06) for screening. The Contractor shall furnish as a minimum Level 2 drawings in the English language, in accordance with DOD-D-1000B, Amendment 4, Drawings, Engineering and Associated Lists, dated 18 August 1987. All approved subcontractor(s), reference part number(s), federal supply code(s) for manufacturers/commercial and Government entity (FSCM/CAGE) code(s) shall be cited by the Contractor (typed, stamped, or in legible writing with authorized signature and date) on the drawing(s) when furnished.

C.9.8 LSAR Parts Pricing:

C.9.8.1 Purpose and Scope: The price estimate included in the LSAR and LSA-036 report is used for budgeting purposes and is the first cost assigned to the NSN for purposes of billing the using units for reimbursable spare or repair parts. The price must be as accurate as possible and be reasonable to prevent or minimize the impact on the procurement process and the fund's status portion of the Supply and Financial management systems of the Department of Defense.

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C.9.8.2 Assumptions: The pricing or costing that will be used for the LSAR parts pricing effort will be performed under the assumption that for part-for-part replacements, where the new part doesn't have an NSN but the part being replaced does, the Government will use the replaced part's NSN related pricing data for determining the price for the new (replacing) part. Allowances may be made for a significant increase or decrease in complexity between old and new parts. All other new parts will be reviewed by experienced personnel who will utilize available sources and check against items of similar complexity and technology in order to establish base price estimates. This philosophy as well as the following ground rules are to be assumed by the Contractor for pricing or estimating purposes in the LSAR Parts Pricing Program:

a. The Contractor will use the greater of the NSN price, or, if known, the procurement history price(s) (normally the last buy price plus an annual inflation factor).

b. The spare or repair parts will be purchased from the same supplier as the production hardware, or the last procurement buy.

c. No nonrecurring cost will be applied to spare parts, such as gaging, tooling, or Initial Production Testing (IPT), unless likely to be required for a buy.

d. All Contractor made items will be produced concurrently with production, if possible. All material will include material markups if applicable.

e. Purchased finished parts will be quoted Free On Board (FOB) vendor's facility. Contractor made items will be quoted at the point of manufacture.

f. All Contractor made items are priced using latest negotiated pricing rates and factors.

g. For purchased finished items, the estimated prices furnished will be based upon data obtained from the actual suppliers of the parts when the actual suppliers can be determined. This means that if a source controlled sub-component (sole source) is found within an assembly made by a different company or supplier, the Contractor will make every attempt to provide an estimated price based on the price from the actual manufacturer of that part. This practice will prevent multiple application of markups to the price.

h. Parts will be quoted "FOB Source". This means that all purchased finished parts will be priced based upon FOB of the actual vendor or supplier facility.

i. Best commercial packaging will be applied to all Contractor made items.

C.9.8.3 Updating Process: Approved engineering change data as incorporated in the LSA program will result in the necessity to revise provisioning documentation to maintain current configuration. As the changes to the LSA documentation are finalized, appropriate provisioning documentation will be prepared and submitted to the Government. The Contractor's provisioning will provide the initial submittal of LSA-036 information including price data, for all new parts initially provisioned by the Contractor. There will be no update to price data after the initial submittal of an LSA-036 report, unless specifically requested by the Government.

C.9.8.4 Prices: The pricing data shall be sub-divided to address prices as follows:

C.9.8.5 Prices cited in the Defense Logistics Service Center (DLSC) files.

a. The Contractor's provisioning personnel will screen new application parts to identify if these new application parts have an associated NSN. This screening will be in the form of an in-house review of the Remote Terminal Army Master Data File (AMDF) Inquiry System (RTAIS).

b. For all cases, where a part is listed in the DLSC files (that is, RTAIS), the Contractor will use the NSN price from these files to satisfy the requirement for LSAR parts pricing.

C.9.8.6 Prices when no NSN is contained in the DLSC files or when the new application parts do not have an associated NSN, the Contractor's LSAR Provisioning will determine LSAR parts pricing, as follows:

a. In all cases, for part-for-part replacements, where the new part does not have an NSN but the part being replaced does, the Contractor will use the replaced part NSN related pricing data for determining the price for the new (replacing) part.

b. All other new parts will be reviewed by experienced personnel who will utilize available sources and check against items of similar complexity or technology in order to establish base price estimates. Additionally, the price estimates

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and actual cost of parts that were used for engineering test or development may be obtained from the test and development engineers or the procurement records; these cost of parts may be used as a basis for provisioning price estimates. Other sources for price estimates that will be used for provisioning data are vendor or distributor parts and hardware catalogues, and vendor inquiries, either written or telephonic. When none of the aforementioned sources are satisfactory, a request will be made to the Contractor's Estimating Department.

c. Computation: When a price for an item is requested from the Contractor's Estimating Department, then the unit of measure price shall be based on the minimum economical production quantity. Minimum economical production quantity is the minimum number of parts the vendor is willing to produce. This quantity will be as determined by the Contractor's estimating and will vary with vendors.

C.9.8.7 LSAR Pricing Plan, Management and Execution: The LSAR Pricing Plan will be managed by the Contractor's Provisioning Department as part of the provisioning program. This will insure that acceptable parts pricing will be included in the data (LSA-036) submittals and will allow the Government the opportunity to review and approve the pricing data as submitted.

C.9.9 Army Oil Analysis Program Support
The Contractor shall furnish any updates to the Oil Analysis Report (CDR1 ILS17) of the maximum and minimum threshold from system components, by chemical element, of all lubricants in the oil-wetted areas of the vehicle isolatable subsystems (i.e. engine, transmission, axles, transfer case, hydraulic system (powertrain, winch, crane)). This data shall be detailed to permit physical tests and spectrometric or equal analysis of the oil in parts per million generated on instructions conforming to MIL-S-83129A. These tests and analysis are used by the Government to detect impending failure and useful life of the oil by its laboratories.

C.9.10 Publications Requirements

C.9.10.1 Technical Manuals

C.9.10.1.1 The Contractor shall prepare and deliver Changes or Revisions to FMTV Technical Publications in accordance with Technical Manuals (TM) Exhibits TM01-TM20 and IETM. The contractor shall comply with all data requirements of Exhibit A and applicable Attachments to Exhibit A. The content and format requirements for these updates is the same content and format established under DAAE07-92-C-R001. Revisions to the FMTV IETM will adhere to the IETM requirements in Engineering Work Directive 95i302 to DAAE07-92-C-R001.

TM9-2320-392-10	MTV A1 Operator's Manual
TM01	
TM9-2320-392-10-HR	MTV A1 Hand Receipt
TM02	
TB9-2300-427-15	MTV A1 Warranty Technical Bulletin
TM03	
TM9-2320-391-10	LMTV A1 Operator's Manual
TM04	
TM9-2320-391-10-HR	LMTV A1 Hand Receipt
TM05	
TB9-2320-426-15	LMTV A1 Warranty Technical Bulletin
TM06	
FMTV A1 Interactive Electronic Technical Manual (IETM).	
IETM	
TM9-2320-392-10	MTV Operator's Manual
TM9-2320-392-10-HR	MTV Hand Receipt
TB9-2300-427-15	MTV Warranty Technical Bulletin
TM9-2320-392-20	MTV Unit Maintenance Instructions
TM9-2320-392-24P	MTV Unit, Direct Support and General Support Maintenance Repair Parts and Special

Tools List

TM9-2320-392-34	MTV Direct Support and General Support Maintenance Instructions
TM9-2320-391-10	LMTV Operator's Manuals
TM9-2320-391-10-HR	LMTV Hand Receipt
TM9-2320-426-15	LMTV Warranty Technical Bulletin
TM9-2320-391-20	LMTV Unit Maintenance Instructions
TM9-2320-391-24P	LMTV Unit, DS and GS RPSTL
TM9-2320-391-34	LMTV DS and GS Maint Instructions
TM9-2330-394-13&P	LMTV/MTV Trailer Manual
TM9-2320-365-10	Basic LMTV Operators Manual
TM07	

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TM9-2320-365-10-HR TM08	Basic LMTV Hand Receipt
TB9-2300-365-15 TM09	Basic LMTV Warranty TB
TM9-2320-365-20 TM10	Basic LMTV Unit Maintenance Manual
TM9-2320-365-34 TM11	Basic LMTV DS and GS Maintenance Manual
TM9-2320-365-24P TM12	Basic LMTV DS & GS Repair Parts and Special Tools List
TM9-2320-366-10 TM13	Basic MTV Operator's Manual
TM9-2320-366-10-HR TM14	Basic MTV Hand Receipt
TB9-2300-366-15 TM15	Basic MTV Warranty TB
TM9-2320-366-20 TM16	Basic MTV Unit Maintenance Manual
TM9-2320-366-34 TM17	Basic MTV DS & GS Maintenance Manual
TM9-2320-366-24P TM18	Basic MTV RPSTL
TM9-2330-394-13&P TM19	LMTV/MTV Trailer Manual

The Contractor shall prepare and deliver as needed a TM9-2815-290-34P DS and GS Maintenance Instructions for Engine and Transmission, TM20, to include installation instructions for putting 3126 engine in basic trucks.

C.9.10.1.2 The Contractor shall develop diagnostic procedures for troubleshooting of the FMTV as specified in Attachment I to Exhibit A (Contract Data Requirement List). All vehicle systems and subsystems shall be covered by these procedures. The diagnostic procedures shall be based on the concepts of artificial intelligence and/or expert systems. Artificial Intelligence, which is synonymous with the term Heuristic, is defined as systemic problem solving using the component first, which has the highest probability of being the cause of the failure, then proceeding to the next most likely cause of the system failure.

C.9.10.1.3 Publication Records

C.9.10.1.3.1 Validation Plan - The Contractor shall prepare/update Validation Plan(s) in accordance with CDRL ILS16 for each Validation effort, and Validation Certifications for each TM/IETM change/revision/submission. The Validation Plan shall be submitted 60 days prior to each Validation effort and shall be submitted electronically in MS Word format. The contractor shall prepare a Validation Certification for each TM/IETM in accordance with Data Item Description DI-M-2196 (CDRL ILS01). The Contractor shall assure that the TM/IETM update will accurately reflect the configuration of the production vehicles and shall include any test corrections, engineering changes, vendor changes and corrections to any errors that were not corrected/incorporated in DAAE07-92-R001. The Contractor shall develop and demonstrate, to the satisfaction of the Government, the policies, processes and procedures by which he will ensure that his writing, illustrating, and editing staff are thoroughly trained in the development of the TMs/IETM. The contractor shall ensure that TMs/IETM are uniform in format, content, depth of coverage and target audience Reading Grade Level (RGL). Description of the implementation of the aforementioned policies, processes and procedures shall form part of the Technical Manual Plan. Electronic files will also be delivered at the time of submittal of the Validation Plan in MS Word format.

C.9.10.1.3.2 Technical Manual Status and Schedules - Technical Manual/IETM status and schedules shall be furnished in accordance with Data Item Description DI-M-6155 (CDRL ILS02).

C.9.10.1.3.3 Technical Manual Cost Report - The Contractor shall provide a Publication Cost Report in accordance with Data Item Description DI-FNCL-80729 (CDRL ILS03). This report must accompany any Final Draft Equipment Publications (FDEPs) to which it applies. Electronic files of the TMs/IETM Cost Report will also be delivered at the time of submittal.

C.9.10.1.4 Copyright Release

The Contractor shall furnish an appropriate release giving the procuring activity permission to reproduce and use copyrighted material contained in any commercial data being used to fulfill the terms of the contract. When the Contractor uses commercial data which covers a subcontractor's component(s) or portion thereof, and the subcontractor's data contains copyrighted material, the Contractor shall be responsible for obtaining a copyright release from the subcontractor and furnishing such release to the procuring activity. In the event no copyrighted information is used in a deliverable under this contract, the Contractor shall certify this in writing. The Procuring Contracting Officer must approve of the copyright release or letter before it is accepted. This release/letter must be delivered with or before the Final Draft Equipment Publication it covers. A Final Draft Equipment Publication will be considered incomplete without this release/letter.

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C.9.10.1.5 Technical Manual Validation

C.9.10.1.5.1 Validation

The Contractor shall conduct TM/IETM Validations in accordance with the EWDs. The Government will require 100% Validations. Hands-On Validation shall be required for disassembly of major components, e.g. engine, transmission, Anti-lock Brake System (ABS), axles, new vehicle models, etc. and shall be 100% performed. The Government may elect to observe the Contractor's Validation(s), and thereby satisfying the Government's Verification requirements. However, the Government may exercise their right to perform separate, partial or 100% Verifications. Contractor shall provide Technical Manuals Certifications in accordance with DID DI-M-2196 (CDRL ILS01).

C.9.10.1.5.2 Validation Hardware

The hardware made available for Validation efforts will be the same type of hardware required for Verification efforts in para C.9.10.1.8.3. The vehicles will be refurbished to TM-10, -20 standards or as defined in the work directive, or new vehicles will be provided before Verification.

C.9.10.1.6 Publications Quality Assurance Program

The Contractor shall continue to use the Publications Quality Assurance Program as established in DAAE07-92-C-R001.

C.9.10.1.7 Publications in-Process Review

Publications In-Process Reviews (IPRs) will be held periodically at the request of either the Government or Contractor for the purpose of reviewing the Contractor's progress. These IPRs will be held at the Contractor facility and at TACOM, Warren, MI.

C.9.10.1.8 Technical Manual Verification

C.9.10.1.8.1 Verification

The Government shall be responsible for conducting verifications of all TM changes/IETM revision prepared and updated under this contract. The site of the verifications will be as specified in the EWD. Contents of TM changes/IETM Revision shall be one hundred percent (100%) verified unless deemed unnecessary by the Government. TACOM reserves the right to verify any portion of the TMs/IETM by witnessing the Contractor's Validations of the equipment. If the foregoing is exercised, the Government reserves the right to make a final determination of acceptability of the witnessed procedures, or to verify Hands-On at a later date. The Contractor shall support Government Manual verifications at TACOM by having vehicle knowledgeable personnel available or on call. The contractor shall also provide, prior to or at the start of Verification, a complete, accurate, updated RPSTL to support the Verification effort. The RPSTL and the applicable vehicle MUST match.

C.9.10.1.8.2 Technical Manuals/ IETMs to Support Verification

The Contractor shall support verification of Draft Equipment Publication technical manuals and IETM as indicated in these sections/applicable specifications. These verifications will be conducted as specified in the EWDs.

All verification findings shall be incorporated by the Contractor in the Final Draft Equipment Publications (TMs and IETM) and made available for Government review. The contractor shall not incorporate any changes/corrections to any TMs/IETM without the knowledge and approval of the Publications Manager and the Maintenance System Manager. Any such additions to any TMs/IETM will impact the acceptance/rejection of subject TMs/IETM.

C.9.10.1.8.3 Verification Hardware

Updated hardware with all design changes incorporated will be provided as required by EWD. The hardware will be maintained by the contractor during verification and validation, and will be refurbished by the contractor prior to fielding.

C.9.10.1.9 Publications Review

Publications will be reviewed, after Verification, by the Government for technical accuracy, editorial accuracy, compliance with guidance, completeness, usability, accuracy, consistency and usability by the target audience. The Government will provide comments on the results of each review.

The Contractor shall deliver to the Government electronic files of all TMs/ETMs/IETMs developed or updated under this contract. The contractor shall deliver these files incrementally as they are developed upon request, and in total upon completion. The electronic files will include the entire manual being updated.

For Hard Copy technical manuals-

All text files will be delivered in the format of any Commercial Off-the-Shelf (COTS) word processing or desktop publishing files or at a bare minimum, ASCII text files. Microsoft Word files are the preferred electronic format for text files.

All graphic files will be delivered in either CCITT Group 4 format or CGM format.

The contractor shall produce an Acrobat ETM file of each hardcopy technical

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manual. Acrobat files are PDF (portable document files) format files. These files shall contain bookmarks and links as described below.

Bookmarks shall be established for the table of contents page, the first page of alphabetical indexing, the first page of each work package, the first page of each chapter, the first page of each section, and for each reference within the same manual (file). Auto linking of all internal referencing, table of contents entries, chapter index entries, and alphabetical index entries shall be done using Alliant Infolinker software (or equivalent).

The following shall be delivered:

Word processing file of each publication (MS Word or equivalent) along with associated graphic files in prescribed format.

Acrobat .PDF file of each publication

All digital files are to be delivered on ISO 9660 CD-ROM.

For IETMs-

Electronic files will be delivered in the following two formats:

1. The uncompiled authored tracks-These consist of MS Word files, their associated SGML files and the referenced graphic files. This should be delivered on CDROM.
2. The compiled deployable IETM which will be a master CDROM that TACOM will send to USAPA for replication and pinpoint distribution.

All FMTV Publications and related material will be delivered to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-IM-HMF, Warren, MI 48397-5000 unless otherwise notified by the publications manager.

C.9.10.1.10 The Contractor shall maintain a Publication history file for the period of this Contract. This file shall contain a record of all changes to each publication as a result of Government-approved Engineering Changes.

C.9.11 Training Requirements

C.9.11.1 The Contractor shall provide training vehicles, instructions and related technical literature in support of courses cited below for Government Personnel on Operation/Operator maintenance (OP), Unit Maintenance (UM) and Direct Support (DS) maintenance, repair, and troubleshooting of all equipment to be furnished by the contractor in fulfillment of this contract.

C.9.11.2 Training Program/Deliverables

C.9.11.2.1 The contractor shall update the existing FMTV Instructor Guides (IG) and Student Guides (SG) to reflect any new technology and any new models provided under this contract. Deliverables shall be submitted in "Microsoft Word 97" format on CD ROM to the Government Training Point of Contact (POC). Updated IG's and SG's shall be reflective of the levels of training cited in Paragraph C.9.11.1. and shall be submitted to the Government Training POC in accordance with CDRLs NET01 & NET02.

C.9.11.2.2 Each student shall receive a hard copy of the IG and SG at the start of each class conducted by the Contractor. One hard copy of any ancillary training material used to reinforce the IG and SG, ie; charts, schematics, work sheets, etc. shall be provided each student at the start of each class. In addition, the Contractor shall provide a classroom set consisting of six (6) paper copies of the Operator technical manual to support I&KPT Operator training and Six (6) CD ROM copies of the IETM to support each maintenance training effort. The TMs shall be the latest version at time of training and shall become Government property upon completion of each training effort.

C.9.11.2.3 Upon completion of each training effort, the contractor shall provide each student a training course completion certificate. In addition, the contractor shall provide the Government Training POC a copy of the student roster and student critique sheets for each respective course.

C.9.11.3 New Equipment Training Support Package (NETSP)

C.9.11.3.1 Training aids - The contractor shall develop a projected list of training components, i.e., engines, mockups, etc., to support training for this contract effort. Components selected shall be based on "new technology" being introduced with this contract buy. Once approved by the Government Training POC, two (2) each of the components selected shall be required to support respective training efforts. The list of the projected training components shall be submitted, in Contractor format, to the Government Training POC in accordance with CDRL NET03.

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C.9.11.3.2 Training Consumables - The Contractor shall develop a list of consumable items required to support the respective training efforts.

C.9.11.3.3 The list of training consumables shall be submitted, in Contractor format, to the Government Training POC in accordance with CDRL NET03.

C.9.11.3.4 Upon completion of the last I&KPT effort, the Government Training POC will give the Contractor disposition as to total quantities of NETSP components required and where the components are to be delivered. Current projection is for five (5) locations:

Ft Bragg, NC	(RTS-M)
Ft Stewart, GA	(RTS-M)
Ft Hood, TX	(RTS-M)
Pearl City, HI	(RTS-M)
Cp Dodge, IA	(RTS-M)

C.9.11.4 Training Courses:

C.9.11.4.1 Practice Class for Rebuy Trucks (1 UM and 1 DS)

C.9.11.4.2 I&KPT for Rebuy Trucks, (1 OP, 1 UM, 1 DS)

C.9.11.4.3 Course lengths shall be as follows:

- a. Operator - Not more than forty (40) hours in length.
- b. Unit Maintenance - Not more than sixty four (64) hours in length.
- c. Direct Support - Not more than eighty (80) hours in length.

C.9.11.4.4 Training Course Locations:

- a. Practice Class ? at the Contractor's site
- b. I&KPT ? at the Contractor's site.

C.9.11.4.5 Student/Instructor ratio - Each course taught shall not exceed twelve (12) students. Two (2) qualified (technical/training experienced) instructors shall be provided for each course.

C.9.11.4.6 Operator familiarization shall be a part of each maintenance course (UM and DS), except for the Practice Class.

C.9.11.4.7 Training Course Schedules/Vehicle Requirements - All training schedules shall be mutually agreed to between the Government and Contractor based on vehicle availability. Projected vehicle requirements and timeframe for events are as follows:

- a. Practice class
 1. Any FMTV model with technology impacts
 2. August 1999 timeframe
- b. I&KPT
 1. Any FMTV model with technology impacts
 2. Two (2) each LMTV and MTV trailers
 3. January 2000 timeframe

C.9.12 Maintenance Technical Representatives (Option)

C.9.12.1 The Contractor shall provide CONUS and OCONUS Maintenance Technical Representative(s) who shall advise and make recommendations to orient and instruct Government personnel with respect to operation, maintenance, repair and Contractor parts supply for the end items, including all components. This does not include work required to support contractor warranties, contractor retrofits, or any activities that are the sole responsibility of the contractor. The maximum amount of this effort is for 9,954 mandays CONUS and 4,731 mandays OCONUS.

C.9.12.2 The Contractor shall make available all required personal vital statistics related to the representative(s) furnished under this provision, including documentary evidence such as a birth certificate, and such evidence as is requested by the installation or area in which services are to be performed.

C.9.12.3 The Contracting Officer at least fifteen (15) days, for major assignments, in advance of the date Technical Representatives are required shall designate the times, installations, activities, and areas within which the services will be performed. For minor assignments for a few days, the notification from the Contracting Officer need be only three (3) days in advance. The actual instructions for the Maintenance Technical Representative shall be provided by the Fielding Team Chief at the Fielding Site, a

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representative of the Government Logistics Fielding Office. If the Fielding Team is not at the site, the Maintenance Technical Representative will take direction from PM/TACOM Log. Top priority will be knowing status/assisting with deadlined vehicles.

C.9.12.4 The unit prices for the Maintenance Technical Representative man-days are inclusive of transportation costs, subsistence lodging and incidental expenses. Only official U.S. holidays will be paid by the Government other than actual days worked. Vacation and other holidays and sick leave pay is solely between the Contractor and his representative. The Government is responsible for actual days worked by any qualified Technical Representative. It is immaterial whether the same representative completes an assignment. Any emergency leave granted is solely between the Contractor and his representative.

C.9.12.5 A man-day of service includes:

- (a) Any period during which the Technical Representative is delayed or prevented from performing any task only if the delay or non-performance is solely the fault of the Government.
- (b) The initial travel time from the Contractor's facility to the site of work, for travel between sites of work and to the Contractor's facility.
- (c) Any time that the Technical Representative is preparing required reports, provided that such preparation is performed at the site of work; the time involved in the report may be monitored and verified by the Government.

C.9.12.6 Invoices for reimbursement for service shall carry the Contractor's certification of the actual man-days services performed. The invoices shall be forwarded to the Administrative Contracting Officer (ACO) for verification of payment. The contractor will document invoice with copies of actual Technical Representative time sheets showing what portion of the time was devoted to technical assistance activities, versus other activities which are the sole responsibility of the Contractor. The Fielding Team Chief will sign off on these time sheets.

C.9.12.7 Each Technical Representative assigned under the provision shall prepare a Maintenance Technical Representative's Daily Site Report, which will include a summary of activities taken place, which shall be in a mutually agreed upon format, and shall be provided to the PM upon request.

C.9.13 The Contractor will refurbish Validation, Verification and Training trucks to the level of refurbishment defined in the work directive.

C.9.14 WARRANTY LIST

The Contractor will provide the Government a copy of the TVS Warranty List on a quarterly basis. The list should be provided electronically in an EXCEL file. Contractor format is acceptable. Data required is listed below:

WTYMSTNO
WTTYTYPECOD
CUSTID
VEHICLENO
MILEAGE
CUSCLAIMNO
CUSTLOCID
PROBDESC
PARTFAILED

*** END OF NARRATIVE C 001 ***